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SUPPLEMENTARY

11th Middle East Cardiovascular Congress (MECC)
&
4th Clinical Cases in Complex Cardiovascular Therapy (CCCCT)

24-26 April 2019- Shiraz, Iran

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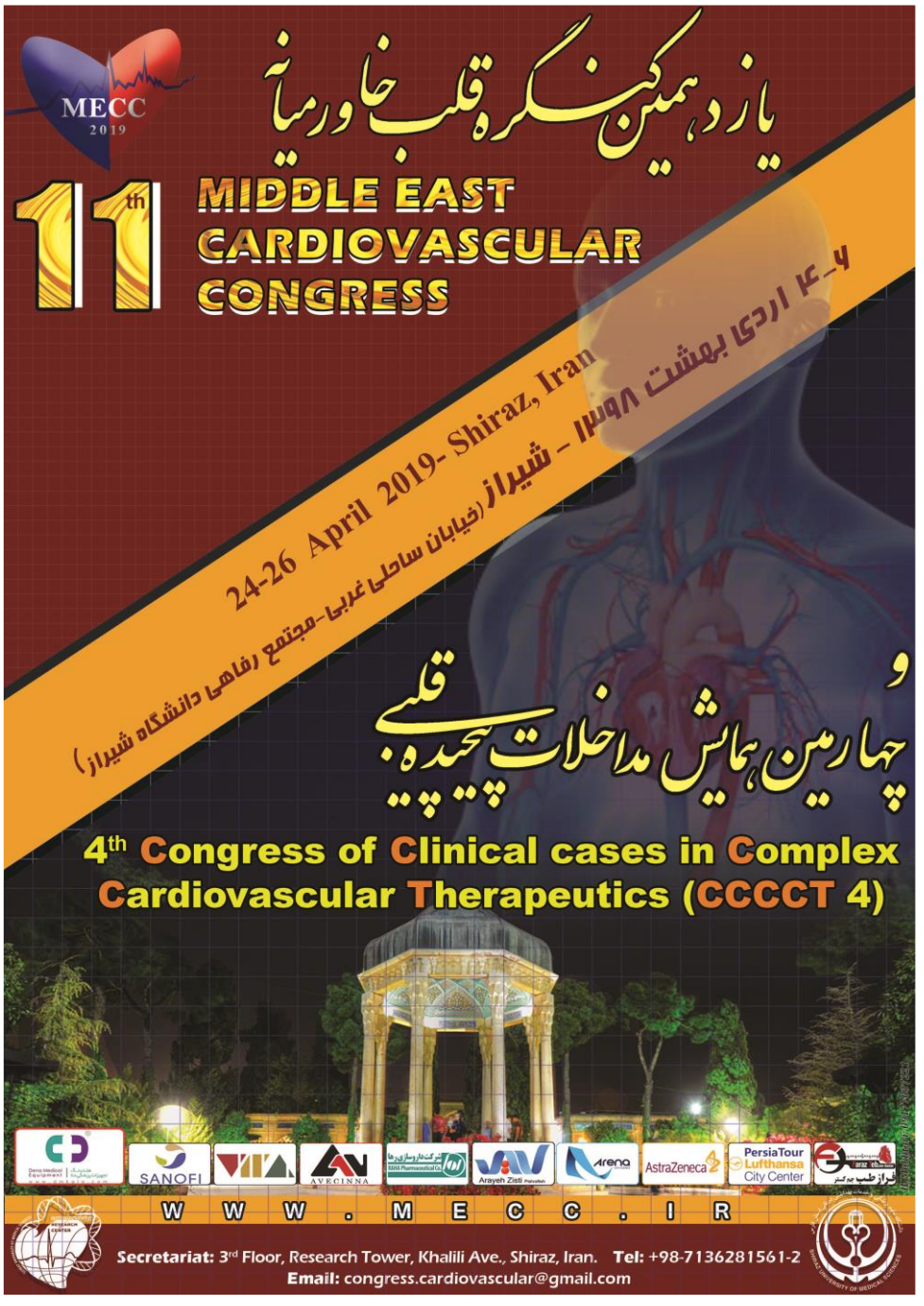
In the Name of

GOD

the Compassionate,
the Merciful


MECC
2019
یازدهمین کنگره قلب خاورمیانه
11th
MIDDLE EAST
CARDIOVASCULAR
CONGRESS
24-26 April 2019- Shiraz, Iran
۴-۶ اردی بهشت ۱۳۹۸ - شیراز (خیابان ساحلی غربی-مجتمع رفاهی دانشگاه شیراز)
و
چهارمین همایش مداخلات پیچیده قلبی
4th Congress of Clinical cases in Complex
Cardiovascular Therapeutics (CCCCT 4)
SANOFI
AVECINNA
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AstraZeneca
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City Center
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11th Middle East Cardiovascular Congress (MECC)
&
4th Clinical Cases in Complex Cardiovascular Therapy (CCCCT)

Number 47, Volume 13, Issue 2, April/May/Jun 2019

24-26 April 2019- Shiraz, Iran

۶-۴ اردیبهشت ۱۳۹۸- شیراز

11th Middle East Cardiovascular Congress (MECC) & 4th Clinical Cases in Complex Cardiovascular Therapy (CCCCT)

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Topics

11th Middle East Cardiovascular Congress:

- Prevention
- Hypertension
- Intervention
- Electrophysiology
- valvular Heart Disease
- Heart Failure
- Congenital Heart Disease
- Endovascular
- Nursing

4th Congress of Clinical cases in Complex Cardiovascular Therapeutics:

- Acute coronary syndrome (ACS)
- ST-Segment Elevation Myocardial Infarction (STEMI)
- Chronic Total Occlusion (CTO) Lesion
- Post CABGs intervention
- Congenital heart disease(ASD, CoA, PDA)
- Endovascular aneurysm repair (EVAR) and thoracic endovascular aortic/aneurysm repair (TEVAR)
- Multi vessel PCI
- Left Main Percutaneous Coronary Intervention (LM PCI)
- Bifurcation lesion
- Peripheral Intervention
- Valvular intervention(TAVI,ViV)
- Complication

پیـــام رئیس کنگره

دکترمحمد جواد زیبایی نژاد

باسمه تعالی

دوستان و همکاران گرامی

مقدم شما را به یازدهمین کنگره قلب خاورمیانه

Middle East Cardiovascular Congress
(11th MECC)

و چهارمین کنگره مداخلات پیچیده قلبی

Congress of Clinical Cases in Complex Cardiovascular Therapeutics
(4th CCCCT)

در شهر زیبای شیراز گرامی می دارم.

درکنگره امسال که با یاری شما همکاران عزیز پر بارتر از هر سال برگزار خواهد شد توجـه ویـژه‌ای بـه پیشگیری از بیماری‌های آترواسکروز عروق کرنر قلب شده است و با توجه بـه آخـرین تحقیقـات انجـام شده در این زمینه اساتید بزرگی از شهرهای مختلف ایران و بخصـوص مرکـز تحقیقـات قلـب و عـروق اصفهان، آخرین تحقیقات و گزارش‌های خود را در این زمینه به کنگره عرضـه خواهنـد کـرد و شـورای محترم راهبردی قلب کشور پیشنهادات اجرایی را جهت تحقق عملیاتی در سراسـر کشـور بـه تصـویب خواهند رساند و درکنار این مهم آخرین فصول مربوط به تشخیص و درمان بیماری‌هـای قلـب و عـروق

بـه بحـث گذاشـته مـی‌شـود و نهایتـا بیمـاری‌هـای بیمـاران مشـکل و درمانهـای پیچیـده بـا حضـور اینترونشنیست‌ها بررسی گذاشته شود و در زمینه بهترین روش‌های درمانی تصمیم‌گیری خواهـد شـد. سیاحت شیراز در اردیبهشت ماه خود داستان دیگری دارد، شمارا می‌سپارم بـه ایـن طبیعـت زیبـا کـه سعدی علیه الرحمه می‌فرماید :

خوشا سپیده دمی باشد آنکه بینم باز
رسیده بر سر الله اکبر شیراز
پدیده بار دگر آن بهشت روی
که بار ایمنی آرد نه جور قحط و نیاز

امیدوارم که خستگی این دو کنگره سنگین پزشکی در کنار آن طبیعت زیبا و ایـن مردمـان خـوب بـه نشاط و شادابی و انرژی جهت روزها و سال‌های آینده تبدیل گردد که بقول شاعر:

خوشا شیراز و مردمانش
خوشا شعر و شاعرانش
خوشا آب و هوای پاک شیراز
فزون باد خیل عاشقانش

ارکان کنگره (Congress Organizatin)

رئیس کنگره

دکتر محمد جواد زیبایی نژاد

دبیران علمی کنگره

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دبیر اجرایی

دکتر نیما مهدی زادگان

دبیر بخش پرستاری

افسانه بشارتی

مسئول وب سایت و ثبت نام و مقالات

حسین مختاری

مسئول برنامه علمی و سخنرانان

زهرا دانشور

مسئول نمایشگاه و اسپانسرها

محسن زارع

مسئول هتلینگ

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جعفر زندی
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علی کریمی آخورمه
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رقیه بیضاوی
محمد رضا ظفرآبادی

روشنک مهزاد
سکینه رضائی
راحله واردی
خدیجه راشدی
امیر سالار معتمدی

Program

11th Middle East Cardiovascular Congress (MECC)
&
4th Clinical Cases in Complex Cardiovascular Therapy (CCCCT)
Shiraz 2019

Program guide

First day: Wednesday 24 April

Time	Main Hall	Hall B	Hall C	Hall D
14:00-15:00			Workshop1: Fetal Echocardiography	Nursing Session 1
15:00-16:30			Workshop2: Role of Advanced Imaging in Patients with Tetralogy of Fallot After Total Correction (TFTC)	
16:30-17:30	High lights of Heart Failure Management			
17:30 -18:00	**OPENING CEREMONY**			
18:00-19:15	Prevention 1			
19:15-19:45	**COFFEE AND TEA BREAK**			
19:45-21:00	Ischemic Heart Disease			
21:00	**PRAY- DINNER**			

Second day: Thursday 25 April

Time	Main Hall	Hall B	Hall C	Hall D
8:00-10:00	Coronary artery disease			
10:00 – 10:30	**COFFEE AND TEA BREAK**			
10:30-12:00	Prevention 2			
12:00 – 13:00	Chronic Total Occlusion (CTO) Lesion			
13:00-14:00	**POSTER PRESENTATION ------ PRAY & LUNCH**			
14:00-15:00		Non Coronary Intervention	Congenital Heart Disease	Workshop3: Myocarditis Imaging and Clinic Pathologic Insights
15:00-15:30		Multi Vessel PCI		Workshop3: Myocarditis Imaging and Clinic Pathologic Insights
15:30-16:00				Nursing Session 2
16:00-16:30	**COFFEE AND TEA BREAK**			
16:30-17:30		Complication cases 1	Electrophysiology 1	Nursing Session 2
17:30-18:30				

Third day: Friday 26 April

Time	Main Hall	Hall B	Hall C	Hall D
8:30-9:30		Left Main Percutaneous Coronary Intervention	Electrophysiology 2	SYMPOSIUM: HEART DISEASE REGISTRATION
9:30-10:30		Bifurcation Lesion		
10:30-11:00	COFFEE AND TEA BREAK			
11:00-13:00		Congenital Heart Disease	Valvular Heart Disease	Nursing Session 3
13:00-13:20			AWARD SESSION (THE BEST POSTER PRESENTATION)	
13:20–14:00	PRAY & LUNCH			
14:00-15:00		Complex Cases	Cardiac Transplantation	
15:00-16:00		Post CABGs Intervention		
16:00–16:30	COFFEE AND TEA BREAK			
16:30-18:30		Complication		

First day: Wednesday 24 April

Nursing Session 1		(HALL D)
Chairpersons: Dr. Hazrati, Ms. Zarifkar, Dr. Torabi		
14:00-15:50	Policies and Programs of Nursing Deputy of Ministry of Health in managing CVD	Dr. Hazrati
	Prevention of CVDs population versus individually focused approaches	Dr. M.H. Kaveh
	Social Determinants of Risk and Outcome of CVD	Dr. Gholamzadeh
	Palliative Care in Heart Failure	Dr. H. Peiravi
	Application of Telenursing in CVD's Management	Ms. Besharati
	Comprehensive Home Care for Heart Disease Patients with Multi-Disciplinary Approach	Dr. Vizeshfar
15:50 – 16:30	*Panel Discusion: Comparison of different modality in treatment of obesity*	*Dr. Babai bigi, Dr Amini, Dr. Babajafari, Dr. Radmanesh*

Workshop1: Fetal Echocardiography Moderator: Dr. Mehdizadegan		(HALL C)
14:00-15:00	Fetal Echocardiography (Sponsored by Mindray Co.)	Dr. Kheirandish , Dr. Mohammadi

Workshop2: Role of Advanced Imaging in Patients with Tetralogy of Fallot After Total Correction (TFTC) Chairman: Dr Mehdizadegan, Dr Amir Ghofran, Dr Alizedeh Sani		(HALL C)
15:00-16:30	Role of CMR in TFTC Patients	Dr Akhavein
	Surgery of Patients with TFTC and Severe PI	Dr Ghasemzadeh
	Interventional Approach to TFTC	Dr Mortezaeian
	Monitoring of Pediatric Patients after TFTC	Dr Peyravian
	Monitoring of Adult Patents after TFTC	Dr Khajali
	Pre Procedural Evaluation for PPVI	Dr kasaei

Program

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Session 1: High lights of Heart Failure Management (Case Studies in Heart Failure)			**(Main Hall)**
Panelists: Dr. Zamirian, Dr. Moaref, A. , Dr. Naghashzadeh , Dr. Kasaee , Dr. Mohammadifar			
16:30-17:30	**Case studies in heart failure**	Dr. Amin	Moderator: Dr. Amin
	Case studies in heart failure	Dr. Naghshzadeh	
	Case studies in heart failure	Dr. Mohammadifar	

17:30 -18:00	OPENING CEREMONY	**(Main Hall)**

Session2: Prevention 1 :With Focus on ACC/ AHA Guideline on the Primary Prevention of Cardiovascular Disease 2019			**(Main Hall)**
Panelists: Dr. Noohi, Dr. Poormoghadas, Dr. Babaei, Dr. Saneie, Dr. Samadi			
18:00-19:15	Cardiovascular Risk Assessment	Dr. Radmanesh	Moderator: Dr. Aghasadeghi
	Hyperlipidemia	Dr. Aghasadeghi	
	Diabetic Mellitus	Dr. Shams	
	Overweight Obesity	Dr. Momenan	
	High light of 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease	Dr. Zibaeenezhad	

19:15-19:45	COFFEE AND TEA BREAK

Session 3: Ischemic Heart Disease			**(Main Hall)**
Panelists: Dr. Kazemisaleh, Dr. Aminian, Dr. Nematipoor, DrAghajani, Dr. Jozanikohan,			
19:45-20:45	primary pci in multivessel disease	Dr. Aslanabadi	Moderator: Dr.Salarifar
	PCI &CABG in multivessel disease	Dr. Kazemisaleh	
	management of patients with acute coronary syndrome with other critical illness	Dr. Salarifar	
20:45-21:00	***State of the art Bridge bypass ,a novel technique in coronary bypass surgery***	*Dr. Zarrabi*	

21:00	PRAY- DINNER

Second day: Thursday 25 April

Session 4: Coronary artery disease (case presentation and evidence base intervention)		(Main Hall)
Panelists: Dr. Aminian, Dr. Firoozi, Dr. Poorhoseini, Dr. Nematipoor, Dr.Abdi		
8:00-10:00	Introduction by chairman	Dr. Aminian
	A 50 Year Old Woman with Acute Onset Chest Pain (5 min presentation 10 min Discussion)	Dr. Aghajani
	restoring of flow after primary PCI in high clot burden vessels (5 min presentation 10 min Discussion)	Dr. Sehati
	Case presentation (3) (5 min presentation 10 min Discussion)	Dr. Alemzadeh
	Case presentation (4) (5 min presentation 10 min Discussion)	Dr. Davoodabadi
	Coronary Artery Aneurysm presenting with Acute Inferior Wall Myocardial Infarction (5 min presentation 10 min Discussion)	Dr. Nematollahi
	Case presentation (6) (5 min presentation 10 min Discussion)	Dr. Farshidi
	Take home message	Dr. Aminian

10:00 – 10:30	COFFEE AND TEA BREAK

Session5: Prevention 2 : Joint Symposium of Isfahan Cardiovascular Research Institute & Shiraz Cardiovascular Research Center(With Focused on ACC/ AHA Guideline on the primary prevention of cardiovascular disease 2019)			(Main Hall)
Panelists: Dr. Sarrafzadegan, Dr.Poormoghdas, Dr. Zibaeenezhad, Dr. Noohi , Dr abtahi			
10:30-12:00	Principles of Cardiovascular Diseases Prevention & Control	Dr. Sarrafzadegan	Moderator: Dr. Sarrafzadegan
	Role of aspirin in primary prevention	Dr. Babaei	
	Smoking and Tobacco use	Dr. Khosropanah	
	Latest Guidelines of Hypertension Prevention, diagnosis and Treatment	Dr. Khosravi	
	Updates on Secondary Prevention and Cardiac Rehabilitation	Dr. Hadavi	
	The Role of Nutrition in Prevention of CVD & Lifestyle Modification	Dr. Mohammadifard	
	Conclusion & Discussion		

Program

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Session 6: Chronic Total Occlusion (CTO) Lesion		(Main Hall)
Panelists: Dr. Nowroozi, Dr. Mohammadi A. , Dr. Ostovan, Dr. Izadpanah		
12:00 – 13:00	Introduction by chairman	Dr. Nowroozi
	Retro PCI of RCA through epicardial channel with guided assisted in tip (5 min presentation 10 min Discussion)	Dr. Nowroozi
	Case presentation (2) (5 min presentation 10 min Discussion)	Dr. Mohammadi A.
	Post CABG CTO with poor retrograde filling potentially may be good vessel (5 min presentation 10 min Discussion)	Dr. Salehizadeh
	Take home message	Dr. Nowroozi
13:00-13:15	*Brilinta: Redefining The Standard Of Care in ACS*	*Dr. Ostovan*

13:00-14:00	PRAY & LUNCH

13:00 – 14:00	**Poster Presentation**	**(Poster area)**

Session 7: Non Coronary Intervention		(HALL B)
Panelists: Dr. Hajzeinali, Dr. Mohebbi, Dr. Shabestari, Dr. Mohammadi A.		
14:00-15:00	Introduction by chairman	Dr. Hajzeinali
	Case presentation (1) (5 min presentation 10 min Discussion)	Dr.Honarvar
	Percutaneous Device Closure of a Ruptured Aortic Sinus of Valsalva Aneurysm in a Patient with a Mechanical Bileaflet Aortic Valve (5 min presentation 10 min Discussion)	Dr. Hajzeinali (Dr.Hosseinsabet)
	The inferior vena cava stenting: A case report (5 min presentation 10 min Discussion)	Dr. Firoozi
	Acute Limb Ischemia (5 min presentation 10 min Discussion)	Dr. Sajedi
	Take home message	Dr. Hajzeinali

Session 8: Multi Vessel PCI		(HALL B)
Panelists: Dr. Ebrahimi, Dr. Aghajani, Dr. Asareh, Dr. Zeinalzadeh		
15:00-16:00	Introduction by chairman	Dr. Ebrahimi
	Case presentation (1) (5 min presentation 10 min Discussion)	Dr. Golmohammadi
	Obligatory PCI in LM+3VD patient using rot ablator (5 min presentation 10 min Discussion)	Dr. Salarifar (Dr.Saadat)
	Case presentation (3) (5 min presentation 10 min Discussion)	Dr. Jamali
	Take home message	Dr. Ebrahimi

Session 9: Congenital Heart Disease		(HALL C)	
Panelists: Dr. Borzooei, Dr. Ajami, Dr. Mehdizadegan, Dr. Mottaghi, Dr. Zeinaloo			
14:00-16:00	Prenatal evaluation of a fetus with single ventricular physiology and legal abortion	Dr. Cheriki	Moderator: Dr. Kheirandish
	Neonatal and infantile and general management of single ventricle	Dr. Peiravian	
	Surgical management and complications of single ventricle	Dr. Ghasemzadeh	
	Interventional management of catheter treatment in single ventricle	Dr. Amoozgar Dr. Mortezaian	
	Electrophysiological problems in single ventricle	Dr. Dalili	
	speckle tracking echocardiography in single ventricle	Dr. Mohammadi	
	Does Pulmonary artery anatomy affect fonton Prognosis	Dr. Shakiba	
	Complications and single ventricle in adult hood of pregnancy	Dr. Sabri	
	Discussion		

Program

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Workshop3: Myocarditis Imaging and Clinic Pathologic Insights (Sponsored by Samsung)		**(HALL D)**	
Panelists: Dr. Aminian, Dr. Tabandeh, Dr. Alizadeh Sani, Dr. Amin			
14:00-15:30	MINOCA	Dr. Aminian	Moderator: Dr. Kasaei
	Case management. (Diagnostic approach. medical management and follow up)	Dr. Vakilian	
	Echocardiography in myocarditis	Dr. Abtahi	
	CMR Criteria for Myocarditis	Dr. Kasaei	
	EMB and Histopathologic Findings in Acute and Chronic Myocarditis	Dr. Amin	
	Challenging cases	Dr. Alizadeh Sani	
	Q & A		

16:00-16:30	COFFEE AND TEA BREAK

Session 10: Complication cases		**(HALL B)**
Panelists : Dr. Ostovan, Dr. Zibaeenezhad, Dr.Falsoleiman, Dr. Sami		
16:30-18:30	Introduction by chairman	Dr. Ostovan
	Iatrogenic Aortic Dissection During PPCI (5 min presentation 10 min Discussion)	Dr. Sajedi
	Complication EVAR	Dr. Shirzad
	Hyper Acute Stent Thrombosis Due to Early Stent Recoil (5 min presentation 10 min Discussion)	Dr. Bayanati
	Case presentation (3) (5 min presentation 10 min Discussion)	Dr. Bahramali
	RCA Dissection & Another Rare Event (5 min presentation 10 min Discussion)	Dr. Emami Farzad
	Left Main Coronary Artery Thrombosis Post Left Cusp PVC Ablation (5 min presentation 10 min Discussion)	Dr. Ahmadi
	Take home message	Dr. Ostovan

Session 11: Electrophysiology1 (Arrhythmias in Heart Failure with Reduced EF)		**(HALL C)**	
Panelists : Dr. Heidari-bakavili, Dr. SeiedHoseini, Dr. Mashreghi, Dr. Sadeghi, Dr. Nikoo			
16:30 – 18:30	Approach to WCT by ECG	Dr. Heidari-bakavoli	Moderator: Dr. Jorat
	Approach to NCT by ECG	Dr. SeiedHoseini	
	Tachycardia Induced Cardiomyopathy	Dr. Jorat	
	Indication for ICD implantation 1) Ischemic CMP 2) Non-ischemic CMP	Dr. Kafi Dr. Mashreghi	
	Management of Bradycardia in HFrEF	Dr. Sadeghi	
	Management of AF in HFrEF	Dr. Nikoo	

Nursing Session 2		**(HALL D)**
Panelists: Dr. Peiravi, Ms. Besharati, Ms. Feilizadeh, Ms. Moani		
15:30-15:45	Cardiac Rehabilitation Phases and Psychological Parameter in CABG Patients	Dr. Rakhshan
15:45-16:00	Self-Management Of Patients With AF And Physical And Psychological Index	Dr. Rambod
16:00-16:15	Mechanical Ventilation in Cardiac Patients and Nursing Care.	Ms. F. Dehghan rad
16:15-16:30	Overview on New Anticoagulants Drugs.	Dr. Rivaz
16:30-16:45	Ethical Dilemmas in Cardiac Case	Dr. Momennasab
16:45-17:00	Nursing Care, Post PCI	Mrs. M. Gharib
17:00-18:00	*Panel Discusion: Life Style is more important than antioxidant*	*Dr. Tabandeh, Dr. Zamirian*

Third day: Friday 26 April

Session 12: Electrophysiology 2			(HALL C)
Panelists : Dr. Tavoosi, Dr. Azhari, Dr.Oreie, Dr.Amohanni, Dr.Nikoo			
8:30 – 10:15	How to follow a case with ICD by primary care physicians?	Dr. Tavoosi	Moderator: Dr. Jorat
	Treatment of stable ventricular tachycardia: 1) Pharmacological treatment 2) Pharmacological treatment 3) Ablation	Dr. Azhari Dr. Nikoo Dr. Oreie	
	Treatment of unstable ventricular arrhythmia 1) Pharmacological treatment 2) Ablation 3) A patient with repeated ICD shock	Dr. Jorat Dr. Amohanni Dr. Shahrzad	

Session 13: Left Main Percutaneous Coronary Intervention (LM PCI)		(HALL B)
Panelists: Dr. Firoozi, Dr. Aminian, Dr. Rakhshani, Dr. Dehghani P.		
8:30-9:30	Introduction by chairman	Dr. Firoozi
	Case presentation (1) (5 min presentation 10 min Discussion)	Dr. Ghasemi m.
	Case presentation (2) (5 min presentation 10 min Discussion)	Dr. Khosravi
	Case presentation (3) (5 min presentation 10 min Discussion)	Dr. Shabestari
	Take home message	Dr. Firoozi

Session 14: Bifurcation Lesion		(HALL B)
Panelists: Dr. Ghasemi m., Dr.Kiani, Dr. Noogh, Dr. Rowhani		
9:30-10:30	Introduction by chairman	Dr. Ghasemi m.
	Case presentation (1) (5 min presentation 10 min Discussion)	Dr. Izadpanah
	Bifurcation stenting with large size mismatch; what are the solutions (5 min presentation 10 min Discussion)	Dr. Gholoobi
	Case presentation (3) (5 min presentation 10 min Discussion)	Dr. Hosseini K.
	Take home message	Dr. Ghasemi m.

SYMPOSIUM : HEART DISEASE REGISTRATION		(HALL D)
9:00 – 10:30	Overview of the activities of the Iranian Network of Cardiovascular Research in the last 7 years	Dr. Noohi Dr. Sarrafzadegan
	National implementation of cardiovascular diseases registry and the role of PI's in other provinces	Dr. Khosravi A.R
	Report of cardiovascular diseases registry and early results in Hormozgan province	Dr. Farshidi
	Report of cardiovascular diseases registry and early results in Kohgeloye & Boyrahmad province	Dr. Behnammoghadam
	Report of cardiovascular diseases registry and early results in Chaharmahal & Bakhtiary province	Dr. Khaledifar
	Report of cardiovascular diseases registry and early results in Khorasan Jonoubi province	Dr. Kazemi T.
	Report of cardiovascular diseases registry and early results in Khoozestan province	Dr. Asareh
	Heart Strategic Council meeting	

10:30 – 11:00	COFFEE AND TEA BREAK

Program

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Session 15: Congenital Heart Disease(ASD, CoA, PDA)		(HALL B)
Panelists : Dr. Sabri, Dr. Ghasemi, Dr. Saiadpour, Dr. Amoozgar, Dr.Zeinaloo		
11:00-13:00	Hypoplastic Aortic Arch Approach Balloon or stent	Dr. Edraki
	Complicated Coronary fistula closure in aneorate	Dr. Ghasemi
	Repeated stent migrations: A case report of left pulmonary artery stenting	Dr.Vesal/ Dr. Jafari
	Complicated ASD closure	Dr. Molaei(Tabriz)
	Pulmonary valvotomy in pulmonary atresia-intact ventricular septum	Dr. Alizadeh/ Dr. Birjandi
	PDA closure in small infant	Dr. Abtahi (Mashhad)
	VSD Closure by Coil	Dr. Zeinaloo

Session 16: Valvular Heart Disease		(HALL C)	
Panelists: Dr. Abtahi, Dr. Roomi, Dr. Razmi, Dr. Mirdamadi, Dr. Homayoon			
11:00-13:00	Approach to Primary & Secondary MR and Case Selection for Valve Repair	Dr. Mirdamadi	Moderator: Dr. Moaref
	Low flow AS	Dr. Razmi	
	Approach to AR and Aortic Valve Repair	Dr. Roomi	
	Approach to Primary and Secondary TR	Dr. Abtahi	
	Approach to Prosthetic Valve Thrombosis	Dr. Homayoon	

Nursing Session 3		(HALL D)
Panelists: Ms. Negahban, Ms. Gharib, Ms. Teimori, Ms. Tanoorifard		
11:00-13:00	Cardiovascular device reuse, cost and benefits.	Ms. Tanorifard
	Polypharmacy in CVD & How to manage it	Dr. Pasyar
	5 Important caring factor of key's in care of pediatric heart surgery	Ms. Hashemi
	chronopharmacological relevance of drugs at an intensive care	Ms. Z. Dehghani
	Post cardiac catheter ablation nursing care	Ms. Mansori

13:00 – 13:20	AWARD SESSION (THE BEST POSTER PRESENTATION)	(HALL C)

13:20 – 14:00	PRAY & LUNCH

Session 17: Complex Cases		**(HALL B)**
Panelists: Dr. Khosravi, Dr. Ostovan, Dr. Kazemialeh, Dr. Adl		
14:00-15:00	Introduction by chairman	Dr. Khosravi
	Lost sidebranch during retro lcx intervention (5 min presentation 10 min Discussion)	Dr. Nowroozi
	Case presentation (2) (5 min presentation 10 min Discussion)	Dr. Khosravi
	Sever calcified Left main ostial stenosis: Rotablation ,IVUS ,stenting (5 min presentation 10 min Discussion)	Dr. Jenab
	Take home message	Dr. Khosravi

Session 18: Post CABGs Intervention		**(HALL B)**
Panelists: Dr. Aslanabadi, Dr. Emami Mahmood., Dr. Salarifar, Dr. Jozanikohan, Dr. Zarrabi		
15:00-16:00	**Introduction by chairman**	Dr. Aslanabadi
	Case presentation (1) *(5 min presentation 10 min Discussion)*	Dr. Ostovan
	Case presentation (2) *(5 min presentation 10 min Discussion)*	Dr. Farsavian
	Case presentation (3) *(5 min presentation 10 min Discussion)*	Dr. Zibaeenezhad
	Take home message	Dr. Aslanabadi

Session 19: Cardiac Transplantation / medical and surgical aspects		**(HALL C)**
Panelists: Dr. Zarrabi, Dr. Ahmadi Z.H, Dr. Naghashzadeh, Dr. Rahmanian, Dr. Heidari, Dr. Shafiee, Dr. Amin		
14:30-16:00	Case Presentation: Pre transplant	Moderator: Dr. Zamirian
	Case Presentation: Post Transplant	
	Surgical aspect of heart transplant	

16:00 – 16:30	COFFEE AND TEA BREAK

Session 20: Complication		**(HALL B)**
Panelists: Dr.Abdi, Dr. Alidoosti, Dr. Ghasemi m, Dr. Hejazi		
16:30-18:30	Introduction by chairman	Dr.Abdi
	complication with catastrophic result (5 min presentation 10 min Discussion)	Dr. Naghshtabrizi
	Coronary perforation (5 min presentation 10 min Discussion)	Dr. Mowloodi (Dr.Kazemisaleh)
	CAROTID ANGIOPLASTY & HEMIPLEGIA (5 min presentation 10 min Discussion)	Dr. Zamani B.
	Early aortic erosion after percutaneous closure of a small atrial septal defect (5 min presentation 10 min Discussion)	Dr. Khajali Dr.Jafari
	Case presentation (5) (5 min presentation 10 min Discussion)	Dr. Adl
	Post PCNL Gross Hematuria (5 min presentation 10 min Discussion)	Dr. Fathi
	Take Home Message	Dr. Abdi

Program Guild

Hall Name	Place	Abbreviation name
Amphitheater	First Floor	Main Hall
Conference Hall	Second Floor	Hall B
Private Hall	First Floor	Hall C
Meeting Hall	Second Floor	Hall D

	Nursing Panels
	Workshops
	MECC Panels
	CCCCT Panels
	Break

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MECC11 Lectures 11th Middle East Cardiovascular Congress (MECC)		
1	**Echocardiographic Assessment of Myocarditis**	Dr. Firoozeh Abtahi
2	**Management of Tricuspid Regurgitation**	Dr. Firoozeh Abtahi
3	**PDA device closure without an arterial access in low birth weight infants**	Saeed Abtahi MD
4	**Intervention in protein losing enteropathy after TCPC**	Hamid Amoozgar, Mohammad Reza Edraki , Ahmad Ali Amirghofran
5	**Aspirin: indicated or not indicated?**	Dr. Babaeebeigi
6	**Telenursing**	Afsaneh Besharati
7	**Chronopharmacological Relevance of Drugs at a Intensive Care**	Zahra Dehghani, Shadi Saadat
8	**Mechanical Ventilation in Cardiac Patients and related Nursing Management**	Fereshteh Dehghanrad
9	**Hypoplastic Aortic Arch Approach Balloon or stent**	Mohammad Reza Edraki M.D
10	**Review of nursing care for patients undergoing percutaneous coronary intervention**	Mahboobeh Gharib
11	**Social Determinants of Risk and Outcomes for Cardiovascular Diseases**	Sakineh Gholamzadeh, Azadeh Maraghian Mohammadi
12	**Five important factors in caring for pediatric undergone cardiac surgery**	Fatemeh Hashemi
13	**Policies and Programs of Nursing Deputy of Ministry of Health & Medical Education in the Field of Managing Cardiovascular Disease**	Dr. Maryam Hazrati
14	**Approach to wide Complex Tachycardias (WCT) by ECG**	Alireza Heidari-Bakavoli, MD
15	**Homograft Heart Valve Banking**	Alireza Heidary Rouchi
16	**Right Ventricular Failure after heart transplantation: A tragic complication**	Ahmadi Zargham Hossein, Naghashzadeh Farah, Jahangiri Alireza
17	**Prevention of Cardiovascular disease; Population-Vs. Individual-Focused Approaches**	Mohammad Hossein Kaveh, PhD
18	**Fetal echocardiography**	Zahra Kheirandish.MD, Hamid Mohammadi.MD
19	**2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease: Tobacco Use**	Dr. Shahdad Khosropanah

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20	**Post Procedure Nursing care in Cardiac Catheter Ablation**	Parisa Mansouri
21	**ICD implantation in Non-Ischemic Cardiomyopathies**	Dr Hamid Reza Mashreghi Moghadam
22	**Valvular Heart Disease**	Dr. Moaraf , Dr. Abtahi, Dr. Mirdamadi, Dr. Razmi, Dr. Roomi, Dr. Homayoon, Dr. Nemati
23	**Speckle Tracking Echocardiography: Single Ventricle Assessment**	Hamid Mohammdi
24	**The Role of Nutrition in Prevention of Cardiovascular Disease and Life Style**	Noushin Mohammadifard, Ph. D
25	**Ethical Dilemmas in Cardiac Care**	Marzieh Momennasab
26	**Management of AF in HFrEF**	Dr. Nikoo M.H
27	**Polypharmacy in Cardiovascular Disease and How to Manage it**	Nilofar Pasyar
28	**Palliative Care in Heart Failure: How does it works well?**	Hamid Peyrovi
29	**General Management Of Single Ventricle Congenital Heart Defects**	Farah Peiravian MD
30	**Monitoring Of Pediatric Patients After Total Repair Of Tetralogy Of Fallot**	Farah Peiravian MD
31	**Cardiac Rehabilitation and Psychological Parameters**	Mahnaz Rakhshan
32	**Self-management strategies in patients with Arterial Fibrillation**	Masoume Rambod
33	**An Overview on New Anticoagulant Drugs**	Mozhgan Rivaz, PhD. Maryam Rivaz, M.D
34	**How to approach to narrow complex tachycardia**	Seyedmostafa seyedhosseini MD
35	**Cardiovascular Devices Reuse/ Costs and Benefits**	Marjan Tanoorifard, MSN
36	**Comprehensive Home Care for Heart Diseases' Patients with Multidisciplinary**	Fatemeh Vizeshfar
37	**State of the art Bridge bypass ,a novel technique in coronary bypass surgery**	Kh.Zarabi MD, k.Jamshidi MD, M. Zamirian MD
38	**Highlights in prevention of CAD in 2019 Guideline ACC/AHA**	Mohammad Javad Zibaeenezhad
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39	**Effect of SPRINT Like Blood Pressure Measurement Compared with Office Blood Pressure Levels**	Mahsa Ahadi, Armin Attar, Alireza Abdi

40	**Comparison of Fluoroscopy Time during Right Trans-Radial Coronary Angiography between Amplatz 2 and Judkins Catheters in Patients with Pseudo Lusoria**	Dr. Mostafa Ahmadi, Laya Valaee
41	**Association between Red Blood Cell indices and Familial Hypercholesterolemia**	Sina Arabi, Golnaz Vaseghi, Aryan Kavosh, Shaghayegh Haghjooy Javanmard, Nizal Sarrafzadegan
42	**J-Shaped Relationship between Cardiovascular Risk and Efficacy of Intensive Blood Pressure Reduction**	Armin Attar, Mehrab Sayadi, Roshanak Mahzad
43	**A case report of Passy tamponade in a diabetic patient**	Arash Amin, Zeinab Norouzi, Ehsan Ghourchian, Mohammad Ameni
44	**Association between serum vitamin D status and the incidence of microembolic infarctions (MIs) following Carotid artery angioplasty and stenting**	Soha Azadi, Farzaneh Foroughinia, Afshin Borhani-Haghighi, Haniyeh Javanmardi
45	**Preventive Effect of Labetalol Infusion on Supraventricular Tachyarrhythmias after Coronary Artery Bypass Graft in ICU: Clinical Trial**	Abbasali Dorosti, Mehdi Khanbabayi Gol, Mohammad Reza Katani
46	**Preventative effects of magnesium sulfate on hemodynamic stability after coronary artery graft in intensive care unit: clinical trial**	Abbasali Dorosti, Mehdi Khanbabayi Gol, Mohammad Reza Katani
47	**Relationship Between Serum Vitamin D And High Sensitivity C-Reactive Protein (Hs-Crp) Level In Patients Undergoing Elective Coronary Stenting**	Farzaneh Foroughinia, Mohamad Reza Alimardani , Shaghayegh Mottaghi
48	**Mobile Mass in the Aortic arch: A Case Report**	Fatemeh Ghani Sehkordi, Rostam Esfandiyari, Firoozeh Alirezaee Shahraki
49	**Study on Related factors to Hospitalization period in patients with Acute Myocardial Infarction Treated after Primary Percutaneous Coronary Intervention**	Mahboobe Gholipour, Arsalan Salari , Fardin Mirbolouk, Salman Nikfarjam, Reza Pourbahador, Ehsan Kazemnejad Leyli,Niloufar Akbari Parsa
50	**Factors Affecting Acute Renal Failure after Coronary Artery Bypass graft surgery**	Khosrow Hashemzadeh, Mehdi Khanbabayi Gol, Marjan Dehdilani, Mohammadreza Katani
51	**Relationship between hemodynamic status during and after surgery on the incidence of delirium in patients undergoing Coronary Artery Bypass Graft surgery**	Khosrow Hashemzadeh, Marjan Dehdilani, Mehdi Khanbabayi Gol, Mohammadreza Katani

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53	**The Circulating Level of Interleukins 6 and 18 in Ischemic and Idiopathic Dilated Cardiomyopathy**	Mahdiyar Iravani Saadi, Ali Mohammad Babaee Beigi, Maryam Ghavipishe, Maryam Tahamtan*, Bita Geramizadeh, Abdolhossein Zare , Ramin Yaghoobi
54	**Relationship between serum vitamin D status and cardiac necrosis marker, troponin I, following elective percutaneous coronary intervention**	Mahtabalsadat Mirjalili*, Faranak Fadakar, Ehsan Mirzaei, Farzaneh Foroughinia
55	**Serum vitamin D concentration status and its correlation with circulating matrix metalloproteinase-9 in patients undergoing elective percutaneous coronary intervention**	Mahtabalsadat Mirjalili, Ehsan Mirzaei, Farzaneh Foroughinia
56	**Amazing in Hospital Results of transradial Approach in Primary Percutaneous Coronary Intervention in Farshchian Heart Center, Hamedan**	Dr. Behshad Naghshtabrizi, Dr. Azadeh Mozayanimonfared, Dr. Farzad Emami , Dr. Amirhossein Yazdi , Dr. Kianoosh Hosseini
57	**Total ischemic time for primary percutaneous coronary intervention (P.PCI) in patient with ST segment elevation myocardial infarction (STEMI) in Fasa Vali-asr hospital 2016-2017**	Leyla sajjadi , Gholamabbas valizadeh
58	**Comparison of Oral and Intravenous administration of Midazolam injectable solution in Patients Undergoing Trans Esophageal Echocardiography**	Mohammadtaghi Salehi omran, Farbod Zahedi Tajrishi, Mohammad Hassan Nadimi, Hassan Salehi Omran
59	**Determining the premature coronary artery disease risk factors according to different ethnicities and religions in Iran and developing a biobank for epigenetic studies (Iran- premature coronary artery disease: I-PAD study)**	Nizal Sarrafzadegan, Ehsan Zarepur, Noushin Mohammadifard, Hamidreza Roohafza, Masoume Sadeghi, Alireza Khosravi, Marjan Mansourian
60	**Evaluation the Quality of Life Before and After ICD Implantation in Patients with Heart Failure**	Sima Sayah, Nahid Fazli, Javad Ebadi, Zohreh Yazdi, Yasaman Jasemzadeh, Erfan Torabi

61	**Evaluation of PAC and PVC frequencies in Holter Monitoring and Their Association with Biventricular Pacing Percentage in Cardiac Resynchronization Therapy Candidates**	Sima Sayah, Mani GhorbanzadehAghdam, Javad Ebadi, Zohreh Yazdi, Yasaman Jasemzadeh
61	**The Effects of the Family-Centered Empowerment Model (FCEM) on of Patient's Self-Care and Family Caregiver's self-efficacy and self-esteem Among the of Patients with Prosthetic heart Valve: a Controlled Clinical Trial**	FahimehAbedini, Zareiyan Armin, Alhani Fatemeh
62	**The relationship between social support and beliefs about medication in patients post coronary angioplasty (a descriptive- correlational study)**	Atefeh allahbakhshian, Rasoul nazif
63	**Medication Adherence and it's Predictors in Patients Post Coronary Angioplasty**	Atefeh Allahbakhshian, Akram Ghahramanian, Shahrair Ostovar, Maryam Allahbakhshian, Rasoul Nazif
64	**Examining the Relationship Between Illness Perception, Medication Adherence, and Readmission in Patients with Heart Failure**	Atefeh allahbakhshian
65	**Effect of Foot Reflexology on Agitation and Extubation Time in Coronary artery Bypass Surgery Patients During the Weaning of Mechanical Ventilation: a Single Blind Randomized Clinical Trial**	Atefeh allahbakhshian, yaser abbaszadeh, Maryam allahbakhshian, rasoul nazif
66	**Study of Risk Factors for Cardiovascular Diseases and the Relationship Between Knowledge and Preventive Behaviors of Cardiovascular Diseases in Patients Referred to Kowsar Hospital of Sanandaj**	Pejman allaveisey, Asrin Saffari,Jalil Adabi, Erfan Salvati
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68	**Evaluation of Anxiety, Stress and Depression in patients with congestive heart failure**	Fatemeh Forozan Jahromi, Mahsa Imanian, Tahere Abdyan
69	**Effects of Obesity on Ecg Pattern in Premenopausal Women Compared To Postmenopausal Women**	Mohammad Javad Joukar, Fatemeh Masjedi
70	**Evaluating the Effectiveness of the Educational Program Based on Trans-Theoretical Model in the Promotion of Physical Activity and Improving the Nutrition Among the Offsprings of Diabetic and Hypertension Patients**	Sadeq Karami Daranjani, Abbas Yazdan Panah, Ozra Nourafkan, Alireza Sharifi Ali Khani Jeihooni

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72	**The relationship between social support and medication adherence in patients post coronary angioplasty (a descriptive- correlational study)**	Atefeh allahbakhshian, Rasoul nazif
73	**Illness Perception in Cardiovascular Patients**	Elaheh Mojab, MS, Mahnaz Rakhshan, PhD, Camellia Torabizadeh PhD, Alireza Abdi Ardekani, MD
74	**Nursing Informatics: A New Concept**	Mohammad Reza Nami, Zhila Saneipour
75	**Peripartum Cardiomyopathy in Pregnant Women Heart Center Case Series Report**	Naiyereh Pishnamaz Ahari, Shahin Imani, Mandana Mojtahedi, Hosniyeh Pishnamaz Ahari, Elham Pour Shahbazi
76	**Seasonal and Gender Pattern Analysis with the Prevalence of Myocardial Infarction in Imam Reza Hospital, Urmia The names of the authors**	Soheila Pourazar, Soraya Vali Pour ,Akram Ilkhani,Fatemeh Pourazar
77	**Prevalence of obesity among over 18 year olds in Qazvin province in 2015**	Maryam Pourbakhshian, Ardeshir Alizadeh Shahrivar, Solmaz Farrokhzad, mahdokht Rezaee, Fariba Armannia, Zahra Karimi, Fatemeh jalalian, Sahar Ali Asghari
78	**Effect of Cardiac Rehabilitation on Sexual health among Patients after Open Heart Surgery**	Mahnaz Rakhshan , Afsoon Tofigh, Azimeh dehghani, Shahrzad Yaktatalab
79	**The effect of Self-care education on the level of depression in patients with angina pectoris**	Mohammad Reza Razmara, Mohammad Reza Jani, Mohammad Hadi Sarvari, Ali Beyzavi, Nemat Saghafi, Zahra derogar
80	**Effectiveness of Continuous Care Model on Self-care in Patients with Heart Failure: A Semi-Experimental Study of the Type Before and After the Randomized Control Group**	Fatemeh Rezamand, Shahnaz Rezamand, Mahshid Ahmadian, Ramesh Hoseinkhani
81	**Investigating the Effect of Artificial Airway Open air Suction Based on Comprehensive Criteria Needed for Suction on the Patients Cardiac Criteria Admitted to ICU**	Fatemeh Taziki Balajelini, Farshid Alazmani Noodeh

82	**Comparison of Fluoroscopy Time during Right Trans-Radial Coronary Angiography between Amplatz 2 and Judkins Catheters in Patients with Pseudo Lusoria**	Dr. Mostafa Ahmadi, Laya Valaee
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85	**More Than Meets the Eye:A 50 Year Old Woman with Acute Onset Chest Pain**	Hassan Aghajani , Hamidreza Soleimani
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87	**Case Presetaion**	Dr. MJ Alemzadeh-Ansari
88	**FEMAIL,53Y,INF&POS STEMI**	Dr. Alidoust
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90	**Persistent Coronary Extravasation Despite two Covered Stents Deployment**	Ehsan Bahramali MD
91	**Pulmonary Valvotomy Results using CTO Coronary Wires, a midterm follow up**	Hassan Birjandi MD
92	**Hyperacute stent thrombosis due to early stent recoil**	Mohammd R. Bayanati, MD
93	**RCA dissection & another rare event**	Dr.Farzad Emami
94	**Primary Percutaneous Coronary Intervention and Stent Thrombosis**	Hossein Farshidi MD – HUMS
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96	**The Inferior Vena Cava Stenting :A Case Report**	Ata firouzi
97	**Bifurcation Stenting with Large Size Mismatch; What Are The Solutions?**	Arash Gholoobi, M.D
98	**Percutaneous Device Closure of a Ruptured Aortic Sinus of Valsalva Aneurysm in a Patient With a Mechanical Bileaflet Aortic Valve**	Alimohammad Hajizeinal, Ali Hosseinsabet
99	**Re-Intervention for Occluded Iliac Vein Stent**	Dr. Mehrdad Honarvar
100	**Case Presentation**	Dr. Kianoosh Hosseini
101	**Sever calcified Left main ostial stenosis:Rotablation ,IVUS ,stenting**	Yaser Jenab MD
102	**Early Aortic Erosion After Percutaneous Closure of a Small Atrial Septal Defect**	Zahra Khajali

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105	**The inferior vena cava stent in a child with Budd-Chiari syndrome:A case report**	Hojat Mortezaeian
106	**Coronary perforation**	Dr. AR Moloudi, Dr. M Dehghan, Dr. D Kazemi Saleh
107	**Complication with Catastrophic Result**	Dr. Behshad Naghshtabrizi, Dr. Azadeh Mozayanimonfared Dr. Nima Naghshtabrizi
108	**Coronary Artery Aneurysm Presenting with Acute Inferior Wall Myocardial Infarction**	Dr. Alireza Nematollahi, MD
109	**Case Presentation**	Dr Mohammadali Ostovan
110	**PDA and CPV to SVC Stenting in a Newborn with Complex Cyanotic Heart Disease**	Keyhan Sayadpour Zanjani, MD
111	**Acute Limb Ischemia**	Mahdi Sajedi Khanian, Drs.Roya Narenji Sani, Dr.javad Movahhedzadeh, Dr.samira Homaei, Dr.jamil Esmaeilian
112	**Iatrogenic Aortic Dissection During PPCI**	Mahdi Sajedi Khanian, Dr.Javad Movahhedzadeh, Dr.samira Homaei
113	**Obligatory PCI in LM+3VD patient using rotablator**	Mojtaba Salarifar MD, Mohammad Saadat MD
114	**PCI on Post CABG-CTO lesion with poor retrograde filling**	Leila Salehizadeh
115	**restoring of flow after primary pci in high clot burden vessels**	Fatemeh Sehati MD
116	**Repeated stent migrations:A case report of left pulmonary artery stenting**	Ahmad Vesal, farshad jafari
117	**CAROTID ANGIPLASTY & hemiplegia**	Dr. Bijan Zamani
118	**Pulmonary Artery Pseudo aneurysm Due to PDA associated with Infective Endocarditis (Case report and literature review)**	Ali Akbar Zeinaloo
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MECC11

Lectures

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Echocardiographic Assessment of Myocarditis

Dr. Firoozeh Abtahi
assistant professor of cardiology , cardiology department , cardiovascular research center, Shiraz university of medical sciences

Myocarditis is defined as an inflammatory disease of the myocardium, can be caused by infectious etiologies especially viral infection, drugs and toxic substances, and also autoimmune diseases involving the myocardium. Myocarditis accounts as an important cause of acute heart failure, sudden death, and dilated cardiomyopathy.
The clinical manifestation of myocarditis can range from mild symptoms or transient electrocardiographic changes, to more severe symptoms of acute heart failure and life-threatening cardiogenic shock.
The diagnosis of myocarditis depends on electrocardiographic changes, cardiac biomarkers, and imaging techniques. Echocardiography as an non-invasive and available imaging modality remains the key method for assessment of myocardium and ventricular function in suspected cases of myocarditis and all patients should undergo echocardiographic examination at presentation and during follow-up.
Conventional 2D echocardiographic examination revealed nonspecific findings, such as global or regional ventricular dysfunction and increased LV wall thickness.
New echocardiography modality of 2D assessment of deformation, which is speckled tracking imaging, is a promising tool for evaluation of patients with suspected myocarditis. This technique has a higher sensitivity in the detection of mild myocardial damage even in patients with preserved LV ejection fraction, and has an additional role in the diagnostic evaluation of patients with suspected myocarditis.

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Management of Tricuspid Regurgitation

Dr. Firoozeh Abtahi
assistant professor of cardiology , cardiology department , cardiovascular research center, Shiraz university of medical sciences

Tricuspid valve regurgitation (TR) is a common manifestation of cardiac valvular disease. Etiologies of TR divide to primary structural alteration of the tricuspid valvular apparatus (primary or organic TR), and secondary impairment of valvular coaptation due to chambers' remodeling (secondary or functional TR).Secondary TR is far more common, and results from right ventricular dilatation or dysfunction, tricuspid annular dilatation, and leaflet tethering, secondary to left-side valvular disease, pulmonary hypertension or atrial fibrillation. Primary TR results from rheumatic, degenerative, congenital, infectious, traumatic or iatrogenic origin.
The goals of imaging in patients with TR are the assessment of mechanisms of regurgitation , severity of regurgitation, and impact of regurgitation on the right

ventricular size and function. Echocardiography is the main and first line imaging modality for the assessment of tricuspid valve morphology and regurgitation. Recently,3D imaging of all three leaflets and commissures showed incremental value in more comprehensive assessment of tricuspid valve regurgitation, and 3D-derived RV volume, although slightly smaller than those which obtained by CMR , had a good correlation with the CMR as a gold standard technique for measurement of RV volume.
Guidelines recommend isolated tricuspid valve surgery in symptomatic patients with severe primary TR, or asymptomatic or mildly symptomatic patients with progressive RV enlargement or dysfunction.
TV surgery is also recommended for patients with severe TR undergoing left-sided valve surgery, or for patients with TR and significant tricuspid annular dilatation. Furthermore, re-operation for severe TR in patients with previous cardiac surgery is associated with significant mortality, and there is paucity of recommendation for surgery in these patients.

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PDA device closure without an arterial access in low birth weight infants

Saeed Abtahi MD
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we are presening our experience in closing the PDA with and without arterial access
all patients underwent transcatheter PDA closure were included detailed echocardiography evaluation of the heart with hemodynamic doppler assessment was performed angiograms were performed in two projecions by the venous catheter positioned at the PDA descending aorta junction PDA can be closed with a variety of devices at the time of cardiac catheterization Percutaneous PDA closure in babies less than 2 kg is a safe and effective method that can be an alternative to surgery.
PDA device closure without an arterial access can be performed safely and efecively by intervenionist. Paient selecion and appropriate pre-intervenion detailed echocardiography and procedure planning are essential for accomplishing device closure of PDA. The procedure is simplified and many patients can be discharged on the day of procedure.

Intervention in protein losing enteropathy after TCPC

Hamid Amoozgar, Mohammad Reza Edraki , Ahmad Ali Amirghofran
Cardiovascular research center, Shiraz University of Medical Sciences, Shiraz, Iran

PLE has been reported to 3 to 18 percent of patients following the Fontan operation. Common presenting symptoms and signs of PLE include diarrhea, peripheral edema, abdominal pain and bloating, pleural effusions, pericardial effusions, and ascites. The intestinal protein loss seen in PLE along with nutrient malabsorption leads to hypoalbuminemia, lymphopenia, and hypogammaglobulinemia, and failure to thrive.
Mortality after PLE diagnosis is high, with only 46 to 59 percent of PLE patients surviving for more than five years after diagnosis. The gold standard for diagnosis of PLE is a combination of clinical features (diarrhea, peripheral edema, abdominal pain and bloating, ascites, and pleural or pericardial effusions) combined with laboratory confirmation (low albumin and increased 24-hour clearance of A-1AT).
Intervention for release of obstruction and decreasing pulmonary pressure by making fenestration in pathway can be useful in management of PLE.

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Aspirin: indicated or not indicated?

Dr. Babaeebeigi

Low – dose aspirin therapy clearly and consistently provides substantial net benefit for persons at high risk for subsequent events secondary to existing CVD. But in primary prevention of CVD, however, the role of aspirin is not straightforward.
For decades, low-dose aspirin (75-100 mg with US 81 mg/day) has been widely administered for ASCVD prevention. By irreversibly inhibiting platelet function, aspirin reduces risk of atherothrombosis but at the risk of bleeding, particularly in the gastrointestinal (GI) tract. Aspirin is well established for secondary prevention of ASCVD and is widely recommended for this indication, but recent studies have shown that in the modern era, aspirin should not be used in the routine primary prevention of ASCVD due to lack of net benefit. Most important is to avoid aspirin in persons with increased risk of bleeding including a history of GI bleeding or peptic ulcer disease, bleeding from other sites, age >70 years, thrombocytopenia, coagulopathy, chronic kidney disease, and concurrent use of nonsteroidal anti-inflammatory drugs, steroids, and anticoagulants. The following are recommendations based on meta-analysis and three recent trials:

- Low-dose aspirin might be considered for primary prevention of ASCVD in select higher ASCVD adults aged 40-70 years who are not at increased bleeding risk.
- Low-dose aspirin should not be administered on a routine basis for primary prevention of ASCVD among adults >70 years.
- Low-dose aspirin should not be administered for primary prevention among adults at any age who are at increased bleeding risk.

Telenursing

Afsaneh Besharati
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Telenursing is the use of "technology to deliver nursing care and conduct nursing practice". Although the use of technology has changed the delivery medium of nursing care and may necessitate competencies related to its use to deliver nursing care, the nursing process and scope of practice does not differ with telenursing. Nurses engaged in telenursing practice continue to assess, plan, intervene, and evaluate the outcomes of nursing care, but they do so using technologies such as the Internet, computers, telephones, digital assessment tools, and telemonitoring equipment. Bearing in mind that health services now provided via teletechnologies have expanded, the term telehealth is defined as "the use of electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health-related education, public health and health administration". Telemedicine, the original term, is defined as the practice of health care delivery, diagnosis, consultation, treatment, transfer of medical data, and education using interactive audio, visual, and data communications.

The American Nurses Association has defined telenursing as a subset of telehealth in which the focus is on the specific profession's practice (i.e., nursing). The technology can be used in the healthcare sector in many ways. It can be used for patients who are located at remote areas from the provider as a remote patient monitoring system that permit the providers to ensure the monitoring of blood pressure, blood sugar, pulse and other crucial indicators of patients in their homes. Video and or audio communication between the nurses and patients in their different homes to replace home visit to give patient education to evaluate as well as triage a patient's condition.

Telenursing effectively supports and promotes part of all nursing activities. Advantages of telenursing are:

- Recommended for the treatment of chronic and low acuity diseases
- More cost-effective
- Reduce hospital ER waiting times
- Provide patients with more autonomy
- Increase accessibility (esp. rural areas)
- Promote health through comprehensive follow-up

Cardiovascular disease is the leading cause of death in IRAN, yet most of the individuals remain unaware of their risks, by application of telenursing. It had been a cost effective method of care, easy to learn by nurses, reduce mortality and morbidity. Finally it is a good way to effectively educate all nurses to be self- confident in their daily operations and they would be creative with respect to this technology.

Chronopharmacological Relevance of Drugs at a Intensive Care

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Background: Chronopharmacology is the science of drug effects and minimization of adverse effects by timing the medications in relation to the biological rhythm. Circadian rhythm city affects all living organisms on earth. Central and peripheral cellular clocks have the ability to oscillate and be entrained to environmental cues, thus allowing organisms to anticipate and synchronize their physiologic processes and behavior to recurring daily environmental alterations. Blood pressure (BP) in normotensive person raises in the early morning, gradually dips by noon, and peaks again by evening to show a greater fall during midnight. To maintaina steady Blood pressure throughout the day necessitates having knowledge of chronopharmacology and drugs following it.
Objectives: The aim of this article is to evaluate the relevance of drug administration to patients with the standard chronopharmacological guidelines.
Conclusion: A very few antihypertensive and all of the diuretics have shown chronopharmacological relevance with their time of administration. This could be because of the lack of knowledge and circadian rhythm. In conclusion, the timing of drug administration is in good relevance to standard chronopharmacology.
Key words: chronopharmacology, drugs , intensive care

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Mechanical Ventilation in Cardiac Patients and related Nursing Management

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Introduction: There are, currently, many patients with cardiac diseases who are in need of mechanical ventilation (MV). Different conditions may necessitate MV management in cardiac patients such as postoperative cardiac surgeries, complicated myocardial infarction, and heart failure. Using MV has hemodynamic effects in all patients. It causes reduction in right and left ventricular preload, while increasing the right ventricular afterload and decreasing left ventricular afterload. Reduction in LV afterload has benefits for patients with left-sided heart failure. It can reduce myocardial workload and oxygen consumption. Using Positive End Expiratory Pressure (PEEP) improves alveolar recruitment and oxygenation, prevents atelectotrauma and decreases afterload. Ventilatory support may be accomplished through Invasive and non invasive ventilation according to the patient's condition. Invasive ventilation should be used in patients who do not have the criteria for non-

invasive ventilation and those with complicated situations. Non-invasive ventilation using Continuous Positive Airway Pressure (CPAP) improves cardiac index and oxygen delivery, minimizes work of breathing and improves cardiovascular performance. Patients' readiness for weaning from mechanical ventilation should be evaluated as soon as possible. Discontinuation may cause increased work of breathing and sympathetic tone. Patients with left ventricular disease are at risk of developing pulmonary edema. Research has shown that using NIV after extubation can reduce the need for reintubatiion.

Conclusion: Thorough understanding of ventilator management is essential for nurses caring for cardiac patients. Despite certain complications for all patients including cardiac patients, using ventilatory support in terms of invasive and non invasive mechanical ventilation has certain benefits for cardiac patients with left ventricular dysfunction. Proper nursing management can prevent and control complications and maximize the useful effects on condition of patients.

Key words: cardiac patients, Mechanical Ventilation, Nursing management

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Hypoplastic Aortic Arch Approach Balloon or stent

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Aortic arch stenting

One of our cases was a 4 months old boy who was operated for repair of interrupted aortic arch at the age of 2 months. After 2 months he developed severe long segment hypoplastic aortic arch, while the right subclavian artery was aberrant.

There was a significant adhesion in the operation area after 2 months, thus we decided to correct the coarctation with intervention.

Palmaz-blue 8*20 was used for dilatation and we selected the proper place of the stent. Do not forget to take the guiding catheter completely back from the balloon to prevent forward slipping of the stent.

We moved the stent backward to the better position by inflation of the balloon

And the result was acceptable

Ballooning of the stenosis

The second case was a 10 days old boy with impression of small aortic arch and with severe discrete coarctation of the aorta near a large patent ductus arteriosus, with a failing left ventricle with EF 25%

Despite the preparation of a formula stent we decided to balloon the coarctation hoping to grow the arch with no stent.

After 7 months we proceeded to closure of the ductus arteriosus, while pressure gradient between the ascending and descending aorta was 7 mm Hg and aortography showed no coarctation with good-sized aortic arch.
It is noticeable that the new Amplatz super-stiff guide-wire was torn during insertion of the delivery system.
As we know it is a rare event and might be due to the strong pull of the wire that we certainly did not do that.

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Review of nursing care for patients undergoing percutaneous coronary intervention

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Background: Percutaneous coronary intervention is an increasingly important revascularisation strategy in coronary heart disease management and can be an emergent, planned or rescue procedure. Nurses play a critical role in delivering care in both the independent and collaborative contexts of percutaneous coronary intervention management.
Peri-PCI care : Nurses within the cardiac catheter laboratory play an integral role in assisting with the procedure and the peri-PCI care of the patient. Following PCI, the major objectives that guide nursing care for patients include: (1) assessing for and reducing the risk of suboptimal outcomes such as recurrent myocardial ischaemia, vascular access site complications and contrast agent nephropathy; (2) promoting patient comfort.
The need to recognise the clinical signs of life-threatening complications consistently emphasises the need for nursing specific practice guidelines. After PCI, symptoms of myocardial ischaemia can identify those at risk for acute vessel restenosis, yet there is limited literature on monitoring regimes post-PCI). Despite this, there is increasing support for continuous ST segment monitoring with the lead demonstrating the most ST elevation during the procedure being the lead of choice. All patients who have signs or symptoms suggestive of myocardial ischaemia during or after PCI and those with complicated procedures should have CK-MB and troponin I or T measured. However, there is limited research relating to monitoring regimes and, therefore, in the clinical setting this practice is generally based on institutional guidelines and individual clinician preferences.
Post-PCI management : Using the search strategy for this article, patient education was the most commonly identified topic related to nursing activities. The majority relied on descriptive self-report or retrospective studies .
Coronary heart disease still lacks sufficient recognition as a chronic disease process, needing a chronic disease management approach. Reduced length of stay typical of a

majority of PCI admissions provides a challenge to effective delivery of secondary prevention strategies. Optimally, the patient and their significant others should be supported to achieve greater levels of insight into the nature of the disease, education regarding the prevention of further disease progression and referral to postdischarge rehabilitation services. Despite the need for effective predischarge information and education, the ability to provide quality patient education during the acute care admission remains controversial; with referral and participation in comprehensive cardiac rehabilitation (CR) programmes continue to be poor.

Considerable research exists regarding secondary prevention programmes, such as CR. Critique of this research has led some to comment on the quality of studies. This includes study design issues such as participant selection, adequate implementation of control, heterogeneity of programme designs, fiscal impact and lack of data on long-term effectiveness), specifically the inclusion of long-term follow-up interventions in programmes. Integral to follow-up, the issue of lasting adherence to lifestyle modification remains a concern for cardiovascular clinicians

Discussion: Nurses play an important role in ensuring optimal outcomes following PCI, both in their independent and collaborative practice roles. Monitoring outcomes and ensuring best practice is dependent on evidence-based guidelines for sheath removal, time to ambulation and monitoring of cardiovascular and hemodynamic status. This review has generated priority areas for research and practice development. Consensus on guidelines for the use of manual pressure, sandbag or assist devices (Femostop® or C-clamp®), dressings to puncture site, bed elevation, analgesia for sheath removal time to ambulation are important considerations. Despite the important role nurses play at each of the patient journey phases, gaps exist in the literature available to inform clinical practice guidelines, specifically targeting nursing practice and drive consensus on what constitutes optimal nursing outcomes for people undergoing PCIs.

Education: Amidst a rapidly developing discipline, cardiovascular nurses find themselves being challenged by technological advances and rapid changes in health care system design. As a result, continuous practice evaluation, re-design and assessment is important in improving health outcomes in people with CHD. Clinicians must also play their part in generating the evidence required for moving practice towards rigorous science-based practice. Further, in undergraduate, postgraduate and continuing professional development it is important to provide information on latest practice trends as well communicating the significance of the PCI within the chronic illness trajectory.

Conclusion: Percutaneous coronary intervention is an integral strategy in CHD management. The challenge for cardiovascular nursing is to engage in developing high-level research evidence to support the development of patient-focused practice standards and monitoring the outcome of their implementation. Health care professionals need to view the PCI experience beyond the confines on an acute care model and consider factors within a chronic care paradigm to achieve optimal health related outcomes.

Key word : PCI , nursing care

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Social Determinants of Risk and Outcomes for Cardiovascular Diseases

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Background: Cardiovascular Disease is a significant cause of disability and premature death in all part of the world. At the moment, cardiovascular Disease account for 40% of deaths in Iran. Physical and economic burden caused by the disease affects not only the individual but also the whole community. In this regard, it is essential to improve our knowledge of cardiovascular disease determinants. However, most of the current studies have been done to identify individual risk factors for cardiovascular disease. Little investigation has been done on the effect of social factors on developing cardiovascular disease.
Methods: A review was done to examine the role of social factors in the development of heart disease.Electronic databases were searched for studies.
Results: The relationship between social determinants and CVD has been observed in many studies.According to the review, social determinants of health (SDH) can be understood as the social conditions in which people are born, grow, live, work and age, and systems used to deal with illness. Conditions that are shaped by the distribution of power, income and access to health services, and resources at all micro,meso, and macro level. Social determinants of health are progressively being introduced as an important contributing factor to current disparities and inequalities whitin health care system.
Conclusion: However, social indicators of cardiovascular disease are mostly found outside of health and preventive care systems, but it is essential to think about it in terms of a chain of cause and effect that enables us to address these factors in our work and program.
Keywords: Cardiovascular disease, risk factors, outcomes

Five important factors in caring for pediatric undergone cardiac surgery

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Abstract: Success in heart surgery and recovery of the infant and child undergoing the surgery depends on immediate, middle, and long term care that is provided by a competent nursing team.
Essential elements of a well-planned care include: monitoring and measurements of vital signs, arterial and venous pressure, body liquids, maintaining respiratory status, and monitoring other signs for early detection of possible post-surgery complications, providing maximum rest and patient comfort, providing emotional support, planning for progressive activity, planning for patient discharge and family-centered care at home.
To provide such care, five factors are essential: compassion, competence, confidence, conscience and commitment. These factors should be considered and strengthened in the nursing team.
Key words: Caring, pediatric cardiac surgery

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Policies and Programs of Nursing Deputy of Ministry of Health & Medical Education in the Field of Managing Cardiovascular Disease

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Today, the incidence of non-communicable diseases and their burden is one of the major challenges of the health system in all countries around the world, which account for the largest share of the burden of all the diseases. Cardiovascular disease is the first cause of death in the country, with has a high prevalence among chronic diseases. Despite the significant progress in the treatment of this disease, the rate of death and readmission associated with this disease is high. This rate in Iran is reported 57% and the highest incidence is related to heart failure. This led to a dramatic increase in patient and health care system financial problems.
Since one of the major policies of the Ministry of Health & Medical Education and the Nursing Deputy, is the prevention, control and management of non-communicable diseases, including cardiovascular disease, this deputy considered cardiovascular disease as a priority.
Given the importance of preventing cardiovascular disease, educating healthy life style and community-based health promotion, which are considered as the duties of

nurses, these programs are organized under different headings and are implemented on various occasions in collaboration with other deputies of the ministry. Considering the challenge of high length of hospital stay and re-admission of patients with cardiovascular disease, one of the programs was the development of home care services for these patients, in line with which, the development of a service package for insurance coverage of providing care for CHF patients at home.
In addition, due to the large number of patients who do not need hospital care and at the same time are not candidate of hospitalization, the regulations for establishing long-term care facilities centers has been drafted. Moreover, according to the patient & family education regulation, one of the goals of the nursing deputy, is educating patient and family to achieve self-care and adherence to treatment, which is currently being carried out at the patient education units of hospitals.
A program, which was conducted, aimed to screen people with hypertension as well as educating self-care to patients suffering from hypertension in 2019, was a pilot project for screening hypertension in Iranians over the age of 30. In this project, the target group was Iranians over the age of 30 who were referred to public and private hospitals where nurses examined their blood pressure. In case of being considered as a high risk person, they referred to health care centers for further follow-up. In this program, 3515 nurses participated in 835 teams. The data were collected through questioning and measuring blood pressure, which were entered into an application that records all the demographic and medical information. Data analysis showed that a total of 119866 people were screened, among them 14% had known hypertension, 13% were referred for further assessment, and 14% received training on hypertension management.
Considering the increasing prevalence of no communicable diseases, including cardiovascular disease, an important part of programs of the Nursing Deputy of the Ministry of Health is now designed to manage these diseases.
Keywords: Non communicable disease, Screening, Hypertension, Healthy life style, CHF, Deputy of Nursing of Ministry of Health

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Approach to wide Complex Tachycardias (WCT) by ECG

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The differential diagnosis of WCT is very important for any physician who is involved with the arrhythmia management.
This a review of the common diagnostic criteria for differential diagnosis of WCT.
A WCT is defined as a rhythm with the HR >100 bpm and a QRS >120 ms. The most common cause of WCT is ventricular tachycardia (VT).
Supraventricular tachycardia (SVT) with aberrant Bundle Branch Block(BBB) or Preexisting BBB is the second commonest cause of WCTs.
Another cause of WCT in SVT is an intraventricular conduction delay secondary to slow intamyocardial conduction secondary to ventricular hypertrophy and dilation, cardiomyopathy and congenital heart disease.

Preexcited SVTs (antidromic AV reentrant tachycardia (AVRT), AVNRT, atrial tavhycardia and atrial flutter with antegrade conduction using a bypass tract are the another causes of SVT with intraventricular conduction delay.
Ventricular paced rhythm should also be considered in the WCT differential diagnosis, because of sometimes small and almost invisible pacing artifact on the ECG.
The most important differential diagnosis for WCT is to distinguish VT from SVT.
A history of structural heart disease and or physical findings of AV dissociation are in favor of VT About 10% of patients with VT (idiopathic VT) have no structural heart disease.
Patients with SVT may or may not have structural heart disease. Patients with VT tend to be older than those with SVT.
Hemodynamic insabillity is not a good criterion for differential diagnosis.
Most algorithms for ECG differential diagnosis are based on the following basic principles :
1) If the morphology of the WCT is compatible with any combination of typical BBB the WCT is caused by SVT. 2) Most VTs are associated with slow initial ventricular activation which results in a more significantly prolonged QRS duration or time to the intrinsicoid deflection
3) During SVT the initial activation is fast, and the conduction delay occurs in the mid to terminal part of the QRS.
During VT the initial ventricular activation is usually slower than the terminal activation (vi/vt criterion).
4) aVR is negative or predominantly negative During SVT , the absence of RS complex in the precordial leads strongly suggests VT
5) the concordance of the QRS complexes in the precordial leads strongly suggests VT.
6) The presence of AV dissociation or VA block suggests VT with a close to 100% specificity.
Both Brugada and Vereckei algorithms will be discussed in this review.

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Homograft Heart Valve Banking

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Tissues of human origin are widely established to be known as replacement of choice for functionally or structurally impaired tissues due mainly to greater biocompatibility, near-native performance, and lower rate of complications. As the most cost-benefit alternative, implantation of allogenic heart valves are considered as life-saving therapeutic modality in limited conditions while it plays a major role in improving the quality of life in most cases.

The main sources of homografts are heart-beating and non-heart-beating deceased donors. The steps of homograft procurement are donor identification, obtaining consent from donor's next of kin, screening the medical and behavioral history, donor physical assessment, tissue retrieval, testing, microbiological studies, tissue processing, preservation, packaging, controlled-rate freezing, and storage. Tissue retrieval shall be conducted in aseptic condition. Tissue processing must be also performed in class 100 (ISO) equivalent to Grade A (GMP) clean room. Allowed warm ischemic time, in case of donors with circulatory death, is 24 hours if the deceased body has been refrigerated (2-6° C) within the first 6 hours of asystole. Allowed total cold ischemic time is 12 hours.

In order to set up a system involved in tissue banking, the requirements are infrastructure including premises, equipment and personnel; authorization for production of medicinal products, in place quality management system (QA, QC), and know-how [international standards (ISOs, GMP, GTP, GLP, AATB, EATB…), national formularies, guidelines, Standard Operating Procedures (SOPs)].

In our practice, and as an average, 83% of heart valves met release criteria and 95% were successfully implanted (2015-2016). In the context of heart valve replacement with homograft, there are different parameters affecting durability comprised of recipient's contributors, surgical technique, donor's characteristics, and quality of homograft (procurement-related factors). In our experience, the findings of a follow-up study on 400 recipients (2006-2015) gave evidence that median survival time was 120 months, total 10-year mortality was 21% (14% early and 7% late), overall late complication rate was 2%, including one case of infective endocarditis and 7 cases with different degrees of valvular dysfunction. Twenty-one recipients (5.2%) needed homograft replacement and 76 (19%) had homograft-related death. The pulmonary valves and large-sized grafts (>19 mm) were more durable.

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Right Ventricular Failure after heart transplantation: A tragic complication

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Right ventricular failure after heart transplantation , although common but in severe forms may be associated with catastrophic complications. The most important problem is prophylaxis, consists of optimal preoperative preparation of the recipient and attention to Pulmonary artery resistance and pressure. It is suggested that the donor weight and height be about 25% more than recipients weight and height. Shorter duration of ischemic time, and topical cooling of the RV are also important issues should be kept in mind.

Avoid RV volume overload and maintenance of CVP around 15 mmHg, use of CO2 in the operative field may reduce air embolism, which is believed to contribute intraoperative RV dysfunction. Normal ventilation and oxygenations should be maintained to avoid pulmonary vasoconstriction caused by acidosis and hypoxia.
Milrinon, Epinephrine, Isoproterenol and Vasopression can be used for moderate RV dysfunction
Inhaled Nitric Oxide decreased PVR, but is not available in our country now.
Delayed sternal closure is another option which can be used in moderate to severe RV dysfunction.
But in the case of severe RV dysfunction ECMO or RVAD should be implanted. Implementation of each depends on the center's protocol; but each had benefits and side effects.
A Young man is presented which developed severe RV dysfunction after orthotopic heart transplant and RVAD implanted for 5 days. The patient extubated 24 hours after surgery and after removal of RVAD was discharged in a satisfactory condition.

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Prevention of Cardiovascular disease; Population- Vs. Individual-Focused Approaches

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Background: Finding effective, yet efficient strategies to reduce the burden of cardiovascular diseases while at the same time moderating health inequalities is an important challenge for health systems. The aim of this paper is to introduce and compare two approaches in the prevention and control of cardiovascular diseases in the community: Population and Individually-Focused Approaches
Method: This is a narrative review study in which a number of information banks and search motors such as PubMed, SCOPUS, Google Scholar, and Google were reviewed. Cardiovascular diseases, prevention, individual, population and high-risk, approaches and strategies were among the key words used in the study construction.
Results: Cardiovascular disease (CVD) is now the leading cause of death in low- and middle - income (LMIC) countries. The rising burden of CVDs in these countries imposes severe economic consequences ranging from the impoverishment of families to high costs of the healthcare system and the weakening of the economies of the country. To address this issue, there are two possible options to consider: a "population - based strategy" and/or a "high risk" (individual-focused) strategy. During the last three decades, approximately three quarters of health gains were achieved through a population - based approach and approximately one quarter through a high - risk approach, in which interventions were targeted at people at high

risk of disease, mainly through forms of secondary prevention. Sometimes it has been argued that a disadvantage of high - risk prevention approaches is that they tend to widen social disparities in health, as they leave more opportunities for acceptance of inequalities than universal measures. Socioecological approaches or models provide useful frameworks for conceptualizing multiple levels of determinants of health and behavior in populations, and they can be used as guides for the design of comprehensive multilevel health promotion interventions.

Conclusion: Population health promotion has the potential to improve the health of the people we serve and the sustainability of the health care system. It also help to reduce health inequalities. The evidence about the return on investment in this approach suggests that efforts to expand population health promotion will reap benefits into the future.

Key words: Cardiovascular diseases (CVD), Prevention, population- based, high risk, approach

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Fetal echocardiography

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Fetal cardiology represents one of the most exciting and rapidly evolving areas in the field of pediatric cardiology. With increasing advances in prenatal diagnosis and fetal management (medically, percutaneously, and surgically ,the critical role of fetal echocardiography ,which is completely noninvasive and harmless, in the management of primary cardiac and noncardiac fetal pathologies becomes obvious.

In this workshop we present a brief analyses of the fetal echocardiography with special focuses on the diagnostic modalities currently available for the assessment of fetal rhythm abnormalities and the various types of fetal arrhythmias and also on heart failure with its worst state as hydrops which is a consequence of primary myocardial or structural heart disease or extra cardiac abnormalities that affect the fetal cardiac output. As would be discussed, abnormalities of systemic venous Doppler have been used to distinguish cardiovascular from noncardiovascular etiologies of hydrops. We also represent fetal echocardiography cases which were referred to our centers

2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease: Tobacco Use

Dr. Shahdad Khosropanah

Promoting healthy lifestyle is the most important way to prevent atherosclerotic cardiovascular diseases. Tobacco use is a major health hazard in both developed and more importantly developing countries. The number of adolescents and females who use tobacco are in the rise in developing countries.
All adults should be assessed at every healthcare visit for tobacco use and those who use any kind of tobacco should be strongly advised to quit. For individuals who have hard time quitting, assistance to quit can be offered by peer groups.
For those individuals who are nicotine dependent, nicotine replacement therapy in the form of patch, gum, lozenge, nasal spray, and oral inhaler can be recommended.
Bupropion and Varenicline are FDA approved drugs which further help nicotine dependent individuals to quit. Bupropion should be avoided in individuals with history of seizures and eating disorders and those who use MAO inhibitors and CYP 2D6 inhibitors. Nausea is a common side effect of Varenicline which can be alleviated with taking the drug with food. Dosing adjustment for renal dysfunction is recommended for Varenicline due to almost exclusive renal clearance of the drug.

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Post Procedure Nursing care in Cardiac Catheter Ablation

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Cardiac catheter ablation is a procedure used for treatment of many types of arrhythmias . In this procedure a special coated wire moved to the heart through the femoral vessels by guiding fluoroscopy and computerized mapping system. Radiofrequency (heat or electrocoatary) or cryoablation (freezing) used for damaging the areas that are responsible for abnormal rhythm.
Nursing care of patients under cardiac ablation include frequent vital signs monitoring, assessment of vascular access for bleeding ,neurologic and hemodynamic evaluation. applying rolled towels under the knee and waist during the ablation for relieving back pain..usually after four hours for venous access and six hours for arterial access patients can come out of the bed, also they would discharge the day after the ablation.Patients and their family caregivers should be instructed about the activity ,drug regimen and symptoms that required immediate managements .after discharge patients have a Holter monitoring for a month to recording heart rhythm.
Conclusion: nursing competency is essential for caring of cardiac ablation patients.pre and post procedure monitoring, considering possible complications and teaching specially at discharge are the main rules of the nurses.
Key words:, catheter ablation, nursing care

ICD implantation in Non-Ischemic Cardiomyopathies

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Cardiomyopathy refers to diseases of the heart muscle. These diseases have many causes, signs and symptoms as well as treatments. In most cases, cardiomyopathy causes the heart muscle to become enlarged, thick or rigid. In rare instances, diseased heart muscle tissue is replaced with scar tissue.

As cardiomyopathy worsens, the heart becomes weaker. The heart becomes less able to pump blood throughout the body and incapable of maintaining a normal electrical rhythm. The result can be heart failure or irregular heartbeats called arrhythmias. A weakened heart also can cause other complications, such as heart valve problems.

Overview

The main types of cardiomyopathy are:

Dilated cardiomyopathy

Hypertrophic cardiomyopathy

Restrictive cardiomyopathy

Arrhythmogenic right ventricular dysplasia

Transthyretin amyloid cardiomyopathy (ATTR-CM)

Approaches to treatment

Some cases of cardiomyopathy have no signs or symptoms, and need no treatment. But in other cases, cardiomyopathy develops quickly with severe symptoms, and serious complications occur. Treatment is required in these instances.

Treatments include lifestyle changes, medications, surgery, implanted devices to correct arrhythmias and other nonsurgical procedures. These treatments can control symptoms, reduce complications and prevent the disease from worsening.

ICD implantation in non-ischemic cardiomyopathies:

Recommendations for Primary Prevention of SCD in Patients With NICM

References that support the recommendations are summarized in Online Data Supplement 27 and 28.

COR LOE Recommendations

I A 1. In patients with NICM, HF with NYHA class II–III symptoms and an LVEF of 35% or less, despite GDMT, an ICD

is recommended if meaningful survival of greater than 1 year is expected

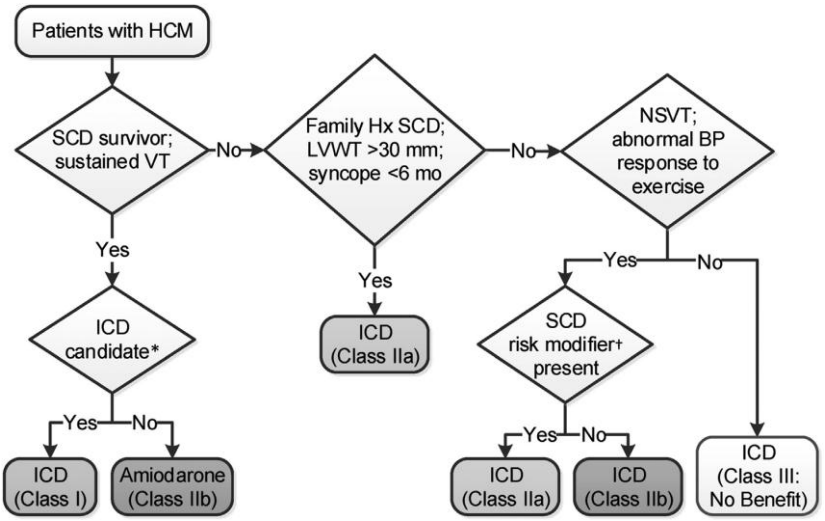
IIa B-NR 2. In patients with NICM due to a Lamin A/C mutation who have 2 or more risk factors (NSVT, LVEF ,45%,

nonmissense mutation, and male sex), an ICD can be beneficial if meaningful survival of greater tha

1 year is expected.

Recommendations for Treatment of Recurrent VA in Patients With NICM

References that support the recommendations are summarized in Online Data Supplement 29.
COR LOE Recommendations
IIa B-R 1. In patients with NICM and an ICD who experience spontaneous VA or recurrent appropriate shocks
despite optimal device programming and treatment with a beta blocker, amiodarone or sotalol can be
beneficial
IIa B-NR 2. In patients with NICM and recurrent sustained monomorphic VT who fail or are intolerant of
antiarrhythmic medications, catheter ablation can be useful for reducing recurrent VT and ICD shocks



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valvular Heart Disease

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The aims of the evaluation of patients with VHD are to diagnose, quantify and assess the mechanism of VHD as well as its consequences. Decision making for intervention should be made by a 'HeartTeam' with a particular expertise in VHD, comprising cardiologists, cardiac surgeons, imaging specialists, anesthetists and, if needed, heart failure, electrophysiology or intensive care specialists.

Precise evaluation of the patient's history and symptomatic status as well as proper physical examination, in particular auscultation and search for heart failure signs, are crucial for the diagnosis and management of VHD.
Following adequate clinical evaluation, echocardiography is the key technique used to confirm the diagnosis of VHD as well as to assess its severity and prognosis. It should be performed and interpreted by properly trained personnel.Echocardiography is also key to assess valve morphology and function as well as to evaluate the feasibility and indications of a specific intervention.Transoesophageal echocardiography (TEE) should be considered when transthoracic echocardiography (TTE) is of suboptimal quality or when thrombosis, prosthetic valve dysfunction or endocarditis is suspected.

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Approach to primary and secondary Mitral Regurgitation

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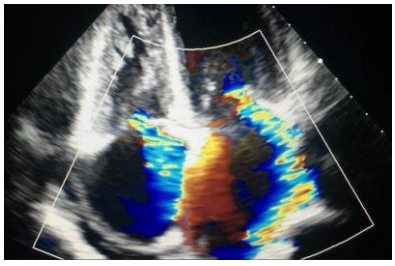
Mitral Regurgitation (MR) is the second most frequent indication for valve surgery in many countries. Surgery is indicated in symptomatic patients with severe primary MR, but in asymptomatic patients some indications should be considered to make an appropriate decision. These indications includes LVEF<60%, LVESD>40 mm, AF secondary to MR and PAP>50mmHg or PAP>60mmHg on exercise echocardiography
MV repair is preferred technique when the results are expected to be durable.
I secondary MR, the valve leaflets and chordae are structurally normal and MR results from an imbalance between closing and tethering forces on the valve secondary to alterations in LV geometry.
Although in secondary MR, lower threshold have been proposed to define severe MR compare with primary MR, no survival benefit have been confirmed for reduction of secondary MR.
The severity of secondary MR should be reassessed after optimized medical treatment.
In contrast to primary MR, medical treatment is invaluable in secondary MR and surgery is mostly recommended when CABG concomitantly is needed.



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Speckle Tracking Echocardiography: Single Ventricle Assessment

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Speckle tracking Echocardiography is feasible for single ventricle assessment in pediatric age group. Most of investigations indicated that this new echocardiographic technique has some advantages rather than conventional 2D echocardiography due to morphology independent, Angel independent and evaluation of mechanical dyssynchrony index.

In LV morphology single ventricle, global and regional LV and RV longitudinal deformation can be determined from the apical four-chamber view and for 18 segment LV GLS Apical 4 chamber + 2 Chamber + Long Axis needed. For left ventricle morphology circumferential and radial strain the mid parasternal short axis view is applicable. Twisting also could be measured by circumferential strain in Apical and Basal segments.

Patients with RV morphology usually have adaption changes in contractility but the most important motion of RV is longitudinal strain and strain rate.

Usually RV morphology has lower GLS rather than LV morphology in single ventricle. This finding relatively confirmed by MRI –TT. In compare to normal biventricular patient most investigation indicate lower GLS in both LV and RV morphology single ventricle.

Data regard of correlation of STE with CMR-TT are controversial, although the most of investigation confirmed the role of STE to highlight ventricular dysfunction in preserved ejection fraction patients.

Mechanical dyssynchrony in single ventricle, same as other congenital and non-congenital condition, affect prognosis adversely. STE can measured this index accurately and could be used as an index for CRT, Follow up of CRT or even to guide the best site for lead implantation in a CRT needed patient.

The Role of Nutrition in Prevention of Cardiovascular Disease and Life Style.

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Global Burden of Disease (GBD) 2017 reported that 11 million deaths was attributable to dietary risk factors. Dietary bahaviour is a main preventable risk factor for non-communicable diseases, especially cardiovascular disease (CVD). The main dietary factors were high salt intake, low intake of whole grains and low intake of fruits were the leading dietary risk factors and accounted for more than 50% of global deaths.
Several international societies including European Society of Cardiology (ESC) and American College of Cardiology/American Heart Association (ACC/ AHA) have diet recommendations for primary CVD prevention. According to ESC guideline, energy intake should be limited to maintain (or obtain) a healthy weight; saturated fatty acids (SFA) to account for <10% of total energy intake, through replacement by polyunsaturated fatty acids (PUFA); trans unsaturated fatty acids (TFA) <1% of total energy intake; less than 5 g of salt per day; 30–45 g of fiber per day, from whole grain products, fruits and vegetables, 2-3 servings of fruit and 2–3 servings of vegetables per day and fish at least twice a week. To benefit from LDL-C lowering, ACC/ AHA guideline advise all adults should consume a healthy diet that emphasizes the intake of vegetables, fruits, nuts, whole grains, lean vegetable or animal protein, and fish and minimizes the intake of trans fats, processed meats, refined carbohydrates, and sweetened beverages. For adults with overweight and obesity, counseling and caloric restriction are recommended for achieving and maintaining weight loss. ACC/ AHA additionally recommend to reduce dietary sodium intake for hypertension prevention.
Due to GBD 2017 the low intake of whole grains was the leading dietary risk factor for deaths in Iran. Also, CVD attributable to high sodium diet was increasing in Iran from 1990 to 2016. Thus, adoption of international guidelines based on the currently available data and local conducted studies is suggested.

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Ethical Dilemmas in Cardiac Care

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Background: The ethical dimension of nursing and its impact on the delivery of high-quality care is considered increasingly. Changes in health care and society have made nursing care more complex and led to new awareness of ethics in clinical practice.
Body: Critical care nurses are confronted regularly with ethical decision making in some issues such as disputes about withdrawal of life-sustaining therapies and

conflicts about access to care or resource allocation. An ethical dilemma is when there are two equally good or poor choices. Ethical practice seems most problematic in daily ethical dilemmas, arising from situations that involve conflicting values or beliefs about what is the right or best course of action.
In cardiac settings there are some issues in which ethical decision making is difficult and lead to moral dilemmas. Some of these issues are: chronic heart failure and its therapeutic devices (including implantable cardioverter defibrillators (ICDs), cardiac resynchronization therapy (CRT), implantable monitors, ventricular assist devices (VADs), and the total artificial heart), cardiovascular risk management, heart disease surgery, resuscitation and end-of-life decisions, and cardiovascular research.
Conclusion: Nurses as a significant member of cardiac and intensive care team must be received proper education and training in this regard.
Keyword: Ethical Dilemmas, Cardiac Care

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Management of AF in HFrEF

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Atrial fibrillation and heart failure with reduced ejection fraction frequently coexist, and each complicate the course and treatment of the other. Recent population based studies showed that the 2 condition together increase the risk of stroke, heart failure hospitalization, and all-cause mortality, especially soon after the clinical onset of AF. Guideline directed pharmacologic therapy for heart failure is important, however; there are various treatment for AF, there are no clear consequence on how best to treat AF with concomitant heart failure. Here we discuss available data and present some examples

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Polypharmacy in Cardiovascular Disease and How to Manage it.

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Background: Cardiovascular disease is one of the leading causes of death worldwide. There were over 17 million CVD-related deaths in 2012; CVD accounts for almost one-third of all deaths. Deaths from CVD are more common and largely the product of interactions among modifiable risk factors that are increasing in much of the developing world while rates have declined in most of the developed countries.

Despite the emphasis on primary prevention, cardiovascular risk factors are still hard to control and a further need for cardiovascular drugs is still pending. In chronic diseases of the cardiovascular system, the progressive use of multiple drugs is common and drugs are prescribed concurrently in accordance with the international guidelines.
The chronic use of five or more drugs over time is defined as polypharmacy and can lead to unpleasant consequences for patients. Due to the long-term use of multiple drugs at the same time, problems such as increased morbidity and costs, inappropriate use of medication and low adherence due to adverse drug reactions in patients are reported.
Conclusion: This paper focuses on the challenges associated with long-term and concurrent use of drugs in chronic cardiovascular patients and how to manage them in nursing.
Keywords: Nursing, Heart Diseases, Polypharmacy

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Palliative Care in Heart Failure: How does it works well?

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Introduction: Heart failure is usually a chronic, ultimately terminal illness with an increasing trend of symptom burden. People with end-stage heart failure experience a high symptom burden, including pain, fatigue, dyspnea, depression, edema, insomnia, anxiety, anorexia, and poor quality of life. Care of the heart failure patient is complex as it is influenced by physical, cognitive, social, and environmental factors.
Complexity of heart failure care requires a patient-centered care planning. Palliative care as a multidisciplinary approach aims to improve quality of life in people with heart failure. Palliative care also has the potential to mitigate symptom burden for both patients and families.
According to the American Academy of Hospice and Palliative Medicine, palliative care is defined as "improving a patient's quality of life by managing pain and other distressing symptoms of a serious illness." It is to be noted that palliative care is provided along with other medical treatments. In this presentation, the aim is to describe how a palliative care approach should be organized for people with heart failure.
Body: Eight domains have been introduced as essential for quality care in palliative care approach: "structure and process of care," "physical aspects of care," "psychological and psychiatric aspects of care," "social aspects of care," "spiritual, religious, and existential aspects of care," "cultural aspects of care," "care of the patient at end of life," and "ethical and legal aspects of care." An interdisciplinary approach makes it possible to address these domains that expand beyond medical

issues. Focusing on the domains helps the team to consider unmanaged symptoms, grief, and family support, respectful communication in the setting of different cultures, educating families about the dying process, and so on.

Conclusion: Integration of palliative care into the heart failure management program has the potential to improve quality of life in people with heart failure. Challenges ahead when establishing a palliative care approach include but not limited to: referral/ utilization, symptom management, communication, prognostication, and cost.

Keywords: Heart failure, Palliative care, Quality of Life

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General Management Of Single Ventricle Congenital Heart Defects

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Neonates who are born with single ventricle (SV) physiology continue to be the most challenging cases of congenital heart defects (CHD) for pediatric cardiologists. These patients are characterized by severe hypoplasia (or absence) of either ventricle or atrioventricular valve, with or without obstruction or atresia of either the pulmonary or systemic outflow tracts. Physiologically, the single ventricle receives both pulmonary and systemic venous blood and ejects simultaneously into the pulmonary and systemic circulations, a pattern commonly referred to single ventricle physiology. Medical and surgical management strategies in these patients are palliative, in order to achieve the optimal balance of systemic blood flow and pulmonary blood flow to prevent increase pulmonary vascular resistance and maximize oxygen delivery. Patients
with single ventricle physiology have a greater risk of death than those with biventricular circulations and are generally committed to multiple palliative interventions throughout childhood with considerable risk. Surgical intervention in the newborn period involves Norwood Stage I for hypoplastic left heart syndrome, placement of a systemic-to-pulmonary artery shunt, or banding of the pulmonary artery, depending on the status of the outflow tracts. Survival following initial palliation in experienced centers is as high as 95%. Fontan operation is the final palliative procedure in these patients. The patients with SV CHD, have complex medical challenges in addition to their cardiac needs, including growth and feeding complications and neurodevelopmental issues. These concerns require a multidisciplinary approach to help these patients maximize their potential.

Monitoring Of Pediatric Patients After Total Repair Of Tetralogy Of Fallot

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During last decades, advances in surgical technique and perioperative care have resulted in excellent survival rates into adulthood. Tetralogy of Fallot (TOF) is one of the most common diagnoses in ACHD clinics. The 30- to 40-year survival rate after repair of TOF has been reported as 85% to 90%. In majority of congenital heart diseases including TOF, repair is not complete or curative and heart remains anatomically, physiologically and electrically abnormal. These patients have many late problems that require long term assessment and treatment. long-term complications include pulmonary insufficiency (PI), RV enlargement and/or dysfunction, residual obstruction and/or branch pulmonary stenosis, residual left to right shunt, dysrrhythmia and sudden cardiac death, heart failure, aortic root dilation and aortic regurgitation. Chronic PI is an important determinant of late outcome after repair of TOF. PI result in a cascade of haemodynamic sequelae including RV dilation, RV dysfunction, impaired exercise tolerance, ventricular arrhythmia, and sudden death. Echocardiography is a noninvasive highly informative imaging modality for follow up of these patients. Owing to the accuracy and reproducibility of its measurements, cardiac magnetic resonance (CMR) imaging is accepted as the imaging modality of choice for the quantification of PR and assessment of RV size and systolic function.

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Cardiac Rehabilitation and Psychological Parameters

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Depression and anxiety are commonly experienced by cardiac patients and are associated with reduced quality of life and mortality, but the evidence for the effectiveness of medical and psychological treatments for depression has been mixed. Psychological models of adjustment describe the ways that cardiac patients adapt and learn to cope with chronic conditions over time.
Regular physical activity plays an important role in the primary and secondary prevention of cardiovascular diseases. Also, cardiovascular patients that have changed their lifestyle and taken regular exercise have improved their survival. In this regard Cardiac rehabilitation is a multi-disciplinary activity that aims to facilitate physical, psychological and emotional recovery, and to enable patients to achieve and maintain better health, even if attendance at cardiac rehabilitation is also lower among patients with depression and dropout rates are higher.

There is recommendation for the improving psychological aspect of cardiovascular patients especially undergoing CABG surgery, by performing the aerobic, standard and purposeful exercises. Also, improving psychological parameters, which is part of the healthy lifestyle may create a new horizon in the quality of life of cardiovascular patients.

Key words: cardiac rehabilitation, coronary artery bypass graft (CABG), Psychological parameters.

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Self-management strategies in patients with Arterial Fibrillation

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Background: Arterial Fibrillation (AF) as a common cardiac arrhythmia is associated with an enhanced risk of stroke, heart failure and death. High levels of AF self-management decrease these complication, patients' hospitalization and improve patients' health status and health care utilization outcomes. This study aimed to determine strategies that AF's patients used to self-management of their disease.

Methods: This was a review article. Data were collected by searching in PubMed, Google scholar, Science Direct, Springer, ProQuest and so on in March 2019.

Results: One of the strategies that patients with AF used to perform self-management is getting knowledge such as symptoms of disease, the nature of AF (its cause, consequence, and trajectory), treatment, the purpose of medication, risk for stroke, warning signs of stroke, and complications of warfarin. They also use some strategies to manage the psychosocial challenges of living with AF. For example, they try to overcome to their fear, and uncertainty and moving to acceptance and coping with their disease and it complication. Moreover, religious and spiritual intervention is another strategy that the patients use to manage their disease.

Conclusion: AF patients use self-management strategies such as information acquisition, positive coping, and religious and spiritual intervention.

Keywords: Arterial Fibrillation, Self-management

An Overview on New Anticoagulant Drugs

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Background: Warfarin is the most common oral anticoagulant in treatment of deep venous thrombosis (DVT), pulmonary embolism (PE), and reducing the risk of stroke in atrial fibrillation (AF) but the safe use of warfarin is challenging. Intracerebral hemorrhage is a major concern with warfarin, especially in elderly with AF. Clinicians have preferred aspirin use in these patients, despite the known stroke risks with this approach. Also, need to blood monitoring and dose adjustment.
The new oral anticoagulants offer both advantages and disadvantages over warfarin therapy.
The aim of this article is an overview on 4 new oral anticoagulants includes: dabigatran, rivaroxaban, apixaban, and edoxaban.
Results: Lower risk of intracranial hemorrhage, rapid onset of activity, no dietary interactions, fewer drug interactions, and no need to check INR are the important benefit of these drugs.
On the other hand, the disadvantages include their dependence on renal elimination, drug costs, rapid loss of efficacy in patient with poor adherence, and lack of an effective antidote.
Conclusion: nurses should be knowledgeable and aware of these new drugs as they manage their patients.
Keywords: oral anticoagulants, new, advantages, disadvantages

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How to approach to narrow complex tachycardia

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This presentation focuses on the basics of differential diagnosis, mechanisms, electrocardiographic distinction, and treatment of supraventricular narrow complex tachycardias.The paroxysmal supraventricular tachycardias (PSVTs) include the triad of atrioventricular nodal reentrant tachycardia (AVNRT), atrioventricular reentrant tachycardia (AVRT), and atrial tachycardia. They are regular, narrow complex tachycardias with a rapid onset and offset, and occur across all age groups. AVRT is similar in pathophysiology to AVNRT, with the exception that it incorporates an accessory pathway (bypass tract) located in the ventricle as part of the reentry, rather than having the reentry isolated to the AV node. The most precise means of diagnosing the exact etiology of a PSVT is through intracardiac electrograms obtained during an electrophysiology study.

Cardiovascular Devices Reuse/ Costs and Benefits

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Reuse is a term that is interpreted in many ways, however, there are three distinct components. Re sterilization of unopened sterile device, processing just by packing and sterilization an opened device but hasn't use and finally, reuse really refers to the cleaning, packaging and sterilization of a single use device which has been used on a patient.
The costs saving, are generally the main reason for reuse of disposal devices such as cardiovascular devices in all around the world, because disposable devices are expensive. However most disposable devices can be reused but, risks of infections, risks associated with device integrity, device compatibility, also risk for personnel and environment should be considered.
Key Words: cardiovascular device – reuse – disposable

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Comprehensive Home Care for Heart Diseases' Patients with Multidisciplinary

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Introduction: Heart disease (HD) are life-threatening condition its management is an interdisciplinary challenge that requires the cooperation of various specialists. The role of the cardiac specialist nurse varies depending on the regional organization of medical care. It may involve home visits, telephone contact, facilitating tele monitoring, running nurse-led clinics, participating in cardiologist-led clinics, or combination of these, as well as providing education for health professionals involved in the management of the patient: Active patient participation in self-care management is considered as essential in chronic illness. Patients described that home-care facilitated participation. Participation in care meant communication between patients and health care professionals, having access to care, active involvement in care, trusting relationships with health care professionals, and having opportunities for decision making.
Methods: Multidisciplinary care may constitute an in-home care component. For example, a number of systematic reviews/meta-analyses have examined multidisciplinary care in relation to heart failure. Multidisciplinary care was examined as a complex intervention, as part of a disease management program, or in subgroups based on the setting in which the intervention was delivered including the home. The aim of multidisciplinary home care approach have: 1-Early supported discharge.2-

Transitional care.3-Hospital-at-home.4-Home-based rehabilitation as an alternative to hospital-based programs.
Results: Integrated care has been defined as realizing the potential of multidisciplinary teams to promote person- centered and coordinated care, tailored to the needs and preferences of the patient, their family and careers. Team members are expected to work in close coordination with one another – including the patient – with mutual respect, clear communication and clear division of responsibilities. The multidisciplinary team should be flexible in working with patients and adapting care to their circumstances, with their needs and preferences considered in all decisions. Many people want to be involved in their own care. The multidisciplinary team must therefore help those living with HD to develop the knowledge and skills to lead self-care and maintain as good a quality of life as possible.
Conclusion: Empowerment of patients, careers and families is vital for long-term engagement in self-care. HD care is often fragmented. Research suggests there are five key areas of focus along the treatment plan that are frequently identified as presenting the greatest challenges and missed opportunities. These 'pressure points' are: presentation and diagnosis; discharge and early follow-up; clinical management; patient empowerment and self-care; and advance care planning.
Keyword: Heart disease; multidisciplinary approach; Home care

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State of the art
Bridge bypass ,a novel technique in coronary bypass surgery

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Nowadays we are facing with numerous cases of CAD with advanced involvement of epicardial vessels .
In a lot of re-do CABG and cases who have failed PCI, surgery remains the single therapeutic option for whom .
Limitation of conduits,their quality and other problems(such as porcelain aorta) are concerns of surgeons and modified surgical techniques should be evolved.
We have described a novel technique so-called "Bridge Bypass"which extra-anatomically bypass the coronary lesions effectively.
Sixty cases operated with this technique from 2015 till now and post operative short to midterm follow-up evaluation and limited imaging study are indicative of graft patency.
Results are hopefully encouraging to do this method increasingly to popularize throughout the world.

Highlights in prevention of CAD in 2019 Guideline ACC/AHA

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۱. بهترین راه پیشگیری از بیماری‌های آترواسکلروتیک عروق کرونر داشتن در پیشگیری یک زندگی سالم همراه با سلامت از کودکی و در تمام طول زندگی است.
۲. یک تیم که متخصصین قلب و عروق هم در آن هستند با توجه به مسائل اجتماعی باید برای فرد تصمیم‌گیری و راهنمایی نمایند.
۳. افراد بین سنین ۴۰ تا ۷۵ سال باید از نظر بیماری‌های قلب و عروق ریسک ۱۰ ساله خود را توسط تیم یاد شده بررسی نمایند. این کار قبل از دارو درمانی باید صورت پذیرد. در بعضی از افراد خاص با استفاده از Calcium Scanning این کار باید صورت پذیرد.
۴. از نظر تغذیه تمامی بزرگسالان از غذای سالم که شامل سبزیجات، میوه، دانه‌های روغنی، گندم کامل، غلات، ماهی استفاده کنند و مصرف چربی‌های ترانس، گوشت‌های process شده را کاهش و نوشابه‌های بدون شکر را از زندگی حذف نمایند. برای افراد چاق محدودیت مصرف refined carbohydrate و نوشابه باید اعمال شود و این افراد، محدودیت مصرف کالری را باید رعایت کنند تا به وزن ایده‌ال برسند.
۵. حداقل ۱۵۰ دقیقه ورزش متوسط (نظیر پیاده‌روی تند) در هفته و یا ۷۵ دقیقه در هفته ورزش سخت برای بزرگسالان ضروری است.
۶. در افراد با دیابت درجه ۲، تغییر شیوه زندگی، عادات غذایی و ورزش روزانه ضروری است در صورت لزوم به استفاده از دارو اولین اقدام درمانی استفاده از قرص‌های متفورمین می‌باشد.
۷. قطع سیگار، قلیان و هر نوع تنباکو در اولین فرصت ضروری است و حتی بزرگسالان باید در محیطی که سیگار استنشاق می‌گردد حضور نیابند.
۸. اسپیرین در جلوگیری از بیماری قلبی امروزه جایگاه ویژه‌ای یافته است و در افراد خاصی استفاده از آن ضروری است.
۹. استفاده از استائین‌ها امروزه خط اول درمانی در پیشگیری از بیماری‌های قلبی شناخته شده است و در کسانی که LDL بالای ۱۹۰ میلی گرم دارند باید شروع شود. در افرادی که دیابت دارند حتی با مقادیر پایین‌تر هم توصیه به استفاده از استائین‌ها شده است.
10. جهت افراد فشارخونی، رژیم غذایی و ورزش خط اول درمانی هستند و فشار خون هدف کمتر از ۸۰/۱۳۰ تعریف شده است.

MECC11

Posters

11th Middle East Cardiovascular Congress (MECC)
& 4th Clinical Cases in Complex Cardiovascular Therapy (CCCCT)

Effect of SPRINT Like Blood Pressure Measurement Compared with Office Blood Pressure Levels

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Introduction. 2017 ACC/AHA Hypertension guidelines has changed definition of hypertension based on SPRINT trial results. However, in SPRINT a classic office based blood pressure measurement was not done. It is assumed that systolic blood pressure (SBP) is 10 to 15 mm Hg higher in practice than in SPRINT. Consequently, a target of 130/80 mm Hg rather than the SPRINT achieved 120/80 mm was chosen. However, this assumption was not tested in a specifically designed study. Here, we aimed to answer this question.
Method. 126 patients were enrolled in this study. For all patients, blood pressure was measured in a quiet room after 5 minutes of resting 3 times using an automated device. The mean of them was considered as SPRINT like blood pressure measurement technique. Then their blood pressure was measured in office by physician. 24-hour ambulatory blood pressure monitoring was done for 26 patients as well.
Results. Office based SBP were 8.47±11.42 mm Hg higher than SPRINT like measurements ($p<0.001$). Diastolic blood pressures (DBP) were 7.05±13.64 mm Hg higher in office ($p<0.001$). SPRINT like blood pressure measurement technique reduced the frequency of white coat hypertension by 42.8%. SPRINT like SBPs and DBPs were 20.91±15.43 and 10.03±8.15 mm HG higher than 24-hour BPs and 19.51±15.17 and 8.67±6.92 mm Hg higher than day-time BPs. One-time blood pressure measured by a nurse was almost equal to SPRINT like BP measurement (mean difference of SBP =0.62±8.72, P=0.61; Correlation coefficient= 0.935, $p<0.001$).
Discussion: SPRINT like SBP is 8.5 and DBP is 7.00 mm Hg lower than office based measurements. Its use significantly reduces white coat hypertension rates. One-time blood pressure measured by a nurse is almost equal to SPRINT like BP measurement. Definition of Hypertension defined by a 24-hour ambulatory monitoring may need a revision.

Comparison of Fluoroscopy Time during Right Trans-Radial Coronary Angiography between Amplatz 2 and Judkins Catheters in Patients with Pseudo Lusoria

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Background: Acquired tortuosity of the right subclavian artery may influence the outcome of right trans-radial coronary angiography using conventional catheters. There is not enough evidence available for choosing the best angiographic catheter for patients with some unique tortuosity or angling of subclavian artery. The aim of this study was to compare the procedure duration of coronary angiography using Amplatz left 2 (AML2) catheter with left judkins catheters in patients with "pseudo lusoria".
Methods: This clinical trial was conducted in Qaem Hospital, Mashhad, Iran during 2017-2018. All patients undergoing coronary angiography were screened and 47 patients with a vascular anomaly called as "pseudo lusaria" were identified. The "pseudo lusoria"was define as "pseudo lusoria"which is defined as a short angle between brachiocephalic artery and subclavian artery during angiography. Patients with "pseudo lusoria"were randomly divided in two equal groups; AML2 and Left Judkins. A checklist including demographic and clinical data was filled for all patients and the duration of fluoroscopy from extraction of 0.0035 wire till engagement of coronary ostium was recorded.
Results A total of 47 patients (25, 53.2% male and 22, 46.8% female) were diagnosed with "pseudo lusoria". There was no significant difference in demographic characteristics, echo cardiograph and electro cardiograph of patients between groups. The use of AML2 catheter was associated with increased potential to perform the procedure in a shorter time shorter than 120 seconds compared to left Judkins ($P<0.001$).
Conclusions The use of AML2 catheter might be beneficial in right trans-radial coronary angiography in "pseudo lusoria"cases. Decrease in fluoroscopy time and as a result, decrease of radiation exposure for both clinician and patient. Also, decrease in manipulation of large vessels and as a result, decrease in vascular complications during and after procedure
Trial registration code: IRCT20180617040123N1 URL:
http://apps.who.int/trialsearch/Trial2.aspx?TrialID=IRCT20180617040123N1
Keywords: Subclavian Artery; Trans-radial coronary angiography; Aortic Anomaly

Association between Red Blood Cell indices and Familial Hypercholesterolemia

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Introduction: Familial hypercholesterolemia (FH) is related with early incidence of Coronary Heart Disease. Despite the great amount of information about FH, the link between hematological and morphological properties of erythrocytes and patients' Dutch Lipid Clinic Network (DLCN) score with FH remains unknown. Therefore, we examined the association between erythrocyte indices and DLCN score.
Method: Patients aged 2-80 with Low Density Lipoprotein-Cholesterol (LDL-C) levels above 190mg/dl were included. DLCN is a validated set of criteria that categorizes patients into groups that are unlikely, possible and potential (with scores of <3, 3-5 and >5 respectively) to have FH, using patient's own and family medical history. Correlation analysis was measured to determine the association between hematological and morphological properties of erythrocytes and DLCN scores of FH patients.
Results: Mean value of Mean corpuscular volume (MCV) in unlikely FH group was 85.39±9.62 while it was 89.17±4.33 in possible and 88±4.38 in potential groups (p value< 0.005); the mean value of mean cell hemoglobin (MCH) was 28±2.72, 30.01±1.75 and 29.33±2.21 in unlikely, possible and potential FH groups respectively (p<0.001).
Discussion: While FH is associated with elevated LDL-C levels, our study suggests that MCV and MCH can also change and serve as diagnostic tools.
Keywords: Familial hypercholesterolemia, Dutch Lipid Clinic Network, MCV, MCH.

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J-Shaped Relationship between Cardiovascular Risk and Efficacy of Intensive Blood Pressure Reduction

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Introduction: The new ACC/AHA hypertension guidelines, recommends a 10-year risk of more than 10% as a threshold to start intensive blood pressure reduction. Briefly, SPRINT trial was a randomized, controlled, open-label trial including 9361 non-diabetic participants with high cardiovascular disease risk and with SBP of ≥130

mmHg. The participants were randomly assigned to an intensive treatment arm with target SBP <120 mmHg, or a control arm targeting an SBP <140 mmHg.
Method: We have analyzed data from non-diabetic participants without cardiovascular or chronic kidney diseases aged below 75 years. 4298 patients were included in this analysis. We examined recalculated 10-year Framingham cardiovascular risk levels and the risk of developing the SPRINT primary composite cardiovascular endpoint using Cox regression models. Natural cubic spline functions were applied to determine the relation between the log hazards and BP values.
Results: Our analysis revealed a clear J-shaped relationship between 10-year Framingham cardiovascular risk levels and effect of intensive blood pressure reduction with risk of fatal and non-fatal CVD events, at a threshold of approximately < 7%.
Conclusion: This data is important in some ways. As the threshold for starting statins is considered as 7.5%, choosing the same level for selecting patients who have gains from intensive blood pressure reduction may make preventive cardiology rules more simple.
Keywords : blood pressure , cardiovascular disease

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A case report of Passy tamponade in a diabetic patient

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The prevalence of diabetes mellitus is increasing and cardiovascular disease is the leading cause of mortality among diabetic patients. In diabetes, unusual features are common. We report a patient, who was presented with massive Passy tamponade and ischemic heart disease.
A 73-year-old female presented with dyspnea NYHA function class III, weakness and lower limb edema. She had a history of diabetes mellitus, hypertension and hyperlipidemia, and chronic kidney disease. Also, she had a history of a stroke. 2 weeks before admission, she was hospitalized due to urinary tract infection with E.coli bacteria.
On physical exam, she was stable. Respiratory sounds were normal. Heart sounds were decreased significantly and 2+ pitting edema was seen in both lower limbs.
On ECG (Electrocardiogram) atrial fibrillation and low voltage QRS complex, and T invert in Anterolateral leads were seen. In echocardiography, ejection fraction was 35% and a massive pericardial effusion with tamponade physiology was seen. The result of the angiography was 3 vessel disease.
The patient was a candidate for CABG (Coronary Artery Bypass Grafting) and drainage of the pericardial fluid. She was undergone radical pericardiectomy and massive debridement of the sternum. Because of the presence of about 1 liter of Passy

discharge, the surgeon decided not to do the CABG and also not to close the sternum. The pericardial washing was done several times in the following days. On the pericardial culture, E.coli and Candida albicans were found.
Although broad-spectrum antibiotic therapy and hydrocortisone therapy were done, the situation of the patient got worse and she was expired due to septic shock and multiorgan failure.
In this case, in addition to ischemic heart disease, the immune system of the patient was damaged due to diabetes. The previous urinary tract infection can be a hematogen source of the E.coli in the pericardial effusion. Eradication of any infection in diabetic patients is necessary and aggressive treatment of them and also a good follow up plan in any infective disease can prevent plenty of unpredicted complications.
Key words: Diabetes Mellitus, Tamponade, Cardiovascular Disease

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Association between serum vitamin D status and the incidence of microembolic infarctions (MIs) following Carotid artery angioplasty and stenting

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Backgrounds: Carotid angioplasty-stenting(CAS) is the treatment of choice for the prevention of stroke due to the carotid artery stenosis. However, it may be associated with some complications including intracranial hemorrhage, hyperperfusion syndrome, and even microembolic brain infarcts. This study is performed to evaluate the association between pre-procedural vitamin D status and the risk of microembolic infarctions (MIs) following CAS.
Methods: A total of 60 patients scheduled to undergo CAS were recruited to the study. Post-procedural MRI was done to determine the number of new diffusion restricted lesions, accumulated lesion surface area, and average surface area. Pre-procedural vitamin D were determined by HPLC method.
Results: A significant association was found between the level of pre-procedural vitamin D and the number of new lesions (P=0.015). Patients with less than 10 ng/ml vitamin D levels (vitamin D deficient) had more risk of developing new ischemic lesions than those with vitamin D levels above 10 ng/ml vitamin D (normal or optimal

vitamin D level) (P=0.047). However, this correlation was not seen between patient with normal and optimal level of vitamin D.

Conclusions:

According to the inverse association between vitamin D levels and the number of new ischemic lesions, vitamin D might be considered as a marker of MIs in post_CAS patients. Although causality remains to be proven, our results provide the rationale to further explore vitamin D as a promising marker for identification of patients at high risk for poor outcome after CAS.

Key words: Vitamin D, Carotid angioplasty and stenting (CAS),
icroembolic infarctions (MIs)

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Preventive Effect of Labetalol Infusion on Supraventricular Tachyarrhythmias after Coronary Artery Bypass Graft in ICU: Clinical Trial

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Introduction: Supraventricular tachyarrhythmia is one of the most dangerous complications after cABG, which is essential for doctors. The aim of this study was to investigate the preventive effect of Labetalol infusion on supraventricular tachyarrhythmias after coronary artery bypass graft in ICU.

Methods: In this clinical trial, 70 patients were randomly assigned to control and intervention groups. The intervention group recovered 20mg of Labetalol in the form of bolus before anesthesia induction and then received 1mg/min for infusion during infusion. For patients in the control group, placebo was injected similarly. The prevalence and type of tachycardia of the supraventricular arrhythmias were measured in two groups by parametric statistical tests. P was less than 0/05 meaningful.

Results: The prevalence of ultra-ventricular arrhythmias was significantly different in the intervention group than the control group (P = 0.001). Atrial fibrillation, which was common in g v and control, was not observed in the intervention group at all. There was a significant difference between the two groups. (P = 0/001)

Conclusion: Labetalol is an appropriate drug for preventing extravascular tachyarrhythmias after cABG.

Key words: Labetalol, supraventricular arrhythmia, cABG, ICU

Preventative effects of magnesium sulfate on hemodynamic stability after coronary artery graft in intensive care unit: clinical trial

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Introduction: Hemodynamic instability during cABG leads to an inappropriate condition of the patient in the ICU, which increases the need for interventions that may cause dangerous complications. Hence, finding a method for hemodynamic stability is necessary. The purpose of this study was to investigate the preventive effects of magnesium sulfate on hemodynamic stability after coronary artery graft in intensive care units.
Methods: In this clinical trial, 70 patients were randomly divided into control and intervention groups. In the intervention group, half an hour before anesthesia, 50mg/kg of magnesium sulfate was received as bolus and during surgery, 500mg/hr of magnesium sulfate was infused until 48 hours after surgery. Patients in the control group received placebo in the same way. The hemodynamic status of patients was observed at intervals of every three minutes. The results were analyzed using the Mann-Whitney U test.
Results: There was no significant difference between the HR status and blood pressure (spleen and arterial blood pressure), pain severity, SPo2 between the two groups (P = 0.15), but the intervention group had more stability during the surgery than the control group (P = 0.049)
Conclusion: Magnesium sulfate failed to provide hemodynamic stability in patients.
Keywords: Magnesium sulfate, Hemodynamic stability, cABG, ICU

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Relationship Between Serum Vitamin D And High Sensitivity C-Reactive Protein (Hs-Crp) Level In Patients Undergoing Elective Coronary Stenting

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Background: Vitamin D deficiency has been known as a major affecting variable in many cardiovascular diseases and inflammation. Percutaneous coronary intervention (PCI) is a process which may have short-term and long-term cardiovascular complications, supposing to be mediated with high sensitivity C-Reactive Protein (hs-CRP), an inflammatory marker. This study aims to investigate the association between

vitamin D deficiency and pre-PCI, post-PCI and pre-post PCI difference of hs-CRP in order to lessen post-PCI cardiovascular complications.

Method: The study population comprised of 150 patients who underwent coronary angioplasty, referring to Kosar hospital from January to July 2017. The clinical and demographic data was collected in questionnaires and venous blood samples were attained before and 24 hours after PCI to measure vitamin D serum level and hs-CRP. Vitamin D level was categorized into three groups, <10ng/ml (group1 or severe deficiency), 10-20ng/ml (group2, deficiency) and >20ng/ml (group3, insufficiency).

Results: In this study, post-PCI hs-CRP and pre-post hs-CRP difference, both showed a statistically significant difference between group1 and other groups(P<0.001). There was no difference between males and females in respect to hs-CRP level.

Conclusion: Regarding to the results patients with lower level of vitamin D have greater post-PCI hs-CRP and may be at greater risk for cardiovascular complications after PCI.

Keywords: vitamin D, high sensitivity C-Reactive Protein, percutaneous coronary intervention

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Mobile Mass in the Aortic arch: A Case Report

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Background: The finding of a floating mass in the aortic arch is rare and the management remains controversial.

Case Report : We describe a 42-year-old woman with an embolic infarction in whom transesophageal echocardiography revealed a mobile mass in the aortic arch that was characterized as atherothrombi with an evidence of embolic infarction in the territory of the middle cerebral artery. Treatment with antiplatelet and anticoagulants failed to resolve the mass and is surgically resected.

Conclusion: In conclusion, the presence of mobile aortic mass seems to carry a high embolic risk. The optimal treatment for mobile aortic arch atherothrombi remains to be elucidated.

Keywords: Embolism, Echocardiography, Transthoracic Echocardiography, Transesophageal Echocardiography

Study on Related factors to Hospitalization period in patients with Acute Myocardial Infarction Treated after Primary Percutaneous Coronary Intervention

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Background: Decreasing the hospital length of stay (LOS) in ST-segment elevation myocardial infarction (STEMI) after primary percutaneous coronary intervention (PPCI) is an issues which is related to reducing hospital costs and increasing the patient's recuperation. This study was aimed to determine the average number of hospital LOS among STEMI patients treated by PPCI as well as evaluating the most important predictors of longer LOS.
Methods: This descriptive cross-sectional study was performed on 561 patients with STEMI who referred to Heshmat Hospital, Rasht, north of Iran. The STEMI was diagnosed based on clinical symptoms and electrocardiographic alterations. As soon as STEMI was detected, patients were transferred to the catheterization laboratory in the shortest possible time and were undertaken PPCI. A questionnaire including characteristics of patients, procedures, in-hospital adverse events were completed.
Results: The hospital LOS 3 to 6 days had the highest prevalence of 47%. The mean LOS in all patients was 5.87 ± 5.23 days. Post PCI in-hospital adverse events, unsuccessful PCI and having comorbidities were the most important predictors.
Conclusion: Through successful PCI, reducing complications after PCI procedure, attention to diseases such as DM, HTN, kidney failure and obesity we would be able to decrease the LOS which ultimately enhance the patient remission and reduce hospital costs.
Keywords: Myocardial Infarction, PCI, Length of stay

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Factors Affecting Acute Renal Failure after Coronary Artery Bypass graft surgery

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Introduction: Damage to renal glomeruli following coronary artery bypass graft (cABG) occurs due to increased creatinine and is one of the main causes of mortality after cABG. Hence, identification of its effective factors to prevent this complication is necessary. Therefore, the present study aimed to investigate the factors affecting acute renal failure after coronary artery bypass graft.

Materials and Methods: In this descriptive cross-sectional study, conducted in 2019 with a full-scale sampling method, observing entry and exit criteria, the factors affecting acute renal failure in a checklist designed for the main purpose of the study, its validity and reliability Confirmed, entered and analyzed by SPSS Ver 20 statistical software using logistic regression.
RESULTS: The most common causes of acute renal failure and urinary creatinine increase were statistically significant correlation (p = 0.001), high blood pressure (0.022), diabetes mellitus (p = 0.01), and drugs Antidepressants (p = 0.006), history of heart disease (p = 0.04).
Conclusion: Identification of risk factors for renal failure in the present study showed that these factors can be easily controlled in the pre-surgical period and require interventional programs.
Key words: Acute renal failure, cABG, creatinine

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Relationship between hemodynamic status during and after surgery on the incidence of delirium in patients undergoing Coronary Artery Bypass Graft surgery

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Introduction: Delirium is one of the adverse effects of postoperative coronary artery disease, and many factors, including changes in blood pressure, are involved in it, but none of them is accurate Not specified. The aim of this study was to Relationship between hemodynamic status during and after surgery on the incidence of delirium in patients undergoing Coronary Artery Bypass Graft surgery cABG.
Methods: In this descriptive-analytic study that was conducted during 2019 with the participation of patients eligible for inclusion in the study. Demographic data as well as the MMSE checklists, whose validity and reliability were confirmed and conducted face-to-face interviews, were used for research purposes. Data were analyzed using Kolmogorov-Smirnov and Spearman tests.
Results: The prevalence of delirium was81%, which had significant correlation between the mean arterial blood pressure during operation and the mental status of patients(P=0.01).However,there was no relation between the mean postoperative arterial pressure and the mental status of the patients Not found (P=0/71).
Conclusion: Considering the loss of arterial pressure during cABG and the reduction of perfusion of organs, cognitive impairment, including delirium, is predictable, but it is important to investigate the causes of delirium after surgery and to intervene to control this complication.
Keywords: cABG, delirium, perfusion

The effect of Increased Thyroid Hormones on Hemodynamic Control in patients undergoing coronary artery bypass graft (cABG): double blind clinical trial

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Introduction: Bleeding during cABG is one of the undesirable side effects that can lead to surgical outcomes. The purpose of this study was The effect of Increased Thyroid Hormones on Hemodynamic Control in patients undergoing cABG.
Materials and Methods: This clinical trial was performed on patients with cABG candidate who were randomly assigned to control and intervention groups in Tabriz in 2019. 20 micro g levothyroxine The food was given as a gavage after being separated from the CBP in N/S serum. Patients in the control group also received placebo in a similar manner. The results were analyzed by independent t-test and χ^2 .
Results: The results showed that there was a significant difference in postoperative hemoglobin level (P=0.001), rate of operation bleeding in the operating room (P=0.001) and postoperative consumption of inotrop (P=0.001). There was a significant difference between the two intervention groups And control was observed while there was no significant difference in the rate of bleeding in the ICU (P=0.521).
Conclusion: The effect of CBP on thyroid hormones is one of the effective factors in increasing the amount of bleeding that can be controlled by drugs that affect thyroid hormone such as levothyroxine.
Keywords: Levothyroxine, Bleeding, Hemoglobin, cABG

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The Circulating Level of Interleukins 6 and 18 in Ischemic and Idiopathic Dilated Cardiomyopathy

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Introduction: By aging population, the heart failure and its life-threatening complications have become an enormous issue in public health. Regarding the inflammation as a major contributing pathological factor, the determination of most important inflammatory targets for immunomodulation is a problematic puzzle in the treatment of heart failure patients and the inflammatory pathways primarily involved in different underlying conditions contributing to heart failure can be an area which is worthy of focused research.

Considering the dilated cardiomyopathy (DCM) as a relatively high-incident disease leading to heart failure, the aim of this study is to determine the difference in the expression level of interleukin (IL)-6 and IL-18 in patients with ischemic and idiopathic DCM.

Methods: 39 non-diabetic patients with ischemic and 37 ones with idiopathic DCM were enrolled in the study. 48 healthy individuals were also considered as control group. For quantitative determination of the mRNA expression level of IL-6 and IL-18 genes, an in-house- SYBR Green Real-Time PCR was used and Glyceraldehyde 3-phosphate dehydrogenase (GAPDH) was considered as internal control gene. The left ventricular end-diastolic volume (LVEDV) and left ventricular ejection fraction (LVEF) was calculated by 2D echocardiographic assessment. Data were finally analyzed via SPSS statistical software version 19.0 using independent t-test and 2-ΔΔCt method and $P<0.05$ were considered statistically significant.

Results: The IL-6 was significantly higher expressed in patients with ischemic and idiopathic DCM than in healthy controls (274.3 and 168.8 times, respectively, both P-values <0.001). The same higher expression of IL-18 was observed in ischemic DCM (48.5 times) and idiopathic DCM (45.2 times) compared with healthy individuals (both P-values <0.001).

Conclusion: Both ischemic and idiopathic DCM associates with IL-6 and IL-18 overexpression. However, no significant difference was observed between these two subtypes of DCM in either interleukin expression level. There is certainly need to further studies for evaluating the uniformity of results and also assessing other molecules in determining their roles in pathophysiology and probable utility for management.

Key words: dilated cardiomyopathy, heart failure, interleukin 6, interleukin 18

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Relationship between serum vitamin D status and cardiac necrosis marker, troponin I, following elective percutaneous coronary intervention

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Introduction: Coronary artery disease is the most common cause of death in the world. On the other hand, vitamin D deficiency has been identified as one of the most important factors in the onset of the disease. The aim of this study was to evaluate the relationship between vitamin D status and the level of cardiac necrosis marker, troponin I, in patients undergoing percutaneous coronary intervention (PCI).

Method: In this prospective cross-sectional study, 150 patients undergoing elective coronary intervention were included. Blood samples were obtained at baseline to measure vitamin D and troponin I levels and 24 h after PCI to measure troponin I.
Results: About 69% of patients suffered from moderate to severe vitamin D deficiency. A significant positive relationship was observed between the serum level of vitamin D and changes in the level of troponin I (P = 0.028). Pre/post procedural troponin I changes were significantly associated with vitamin D deficiency in females (P=0.028) but not in males (P=0.150).
Discussion: According to the inverse association between low vitamin D levels and upward changes in pre/post procedural troponin I changes, vitamin D may be considered as a marker of short-term prognosis in post-PCI patients particularly in females.
Keywords: Vitamin D, Troponin I, Percutaneous Coronary Intervention, Cardiovascular Disease

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Serum vitamin D concentration status and its correlation with circulating matrix metalloproteinase-9 in patients undergoing elective percutaneous coronary intervention

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Background: Cardiovascular diseases (CVD), have become increasingly life-threatening during recent decades. Several studies have shown that matrix metalloproteinase-9 (MMP-9) plays an important role in the process of atherosclerosis and heart remodeling. On the other hand, Vitamin D deficiency have been recognized as a risk factor for CVD. According to the prevalence of vitamin D deficiency in our country, Iran, we aimed to evaluate the relationship between vitamin D status and the level of MMP-9 in patients undergoing percutaneous coronary intervention (PCI). **Methods:** In this prospective cross-sectional study, patients who were candidates for elective coronary angioplasty were included. Baseline serum MMP-9 and vitamin D levels were measured before intervention. Patients were categorized into three groups: Vitamin D-severely deficient (≤ 10 ng/ml), vitamin D-moderately deficient (11-20 ng/ml), and vitamin D-insufficient/sufficient (> 21 ng/ml).
Results: Totally, 150 patients were assessed. The analysis showed that serum MMP-9 levels were higher in patients with lower vitamin-D concentrations. A significant inverse correlation was found between MMP-9 concentration and 25(OH) vitamin D level (P = 0.039).

Conclusion: According to our results, it may be concluded that low levels of vitamin D may lead to more vulnerable atherosclerotic plaques and consequently more cardiovascular adverse effects in post-PCI patients.
Keywords: Vitamin D, Matrix Metalloproteinase-9, Percutaneous Coronary Intervention, Coronary Arterial Disease

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Amazing in Hospital Results of transradial Approach in Primary Percutaneous Coronary Intervention in Farshchian Heart Center, Hamedan

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Background: Evaluation of the outcome of PPCI for STEMI patients in referral Farshchian Heart Center, Hamadan.
Methods: All patients with STEMI [1286 cases: 457 in 2016, 453 in 2017 and 376 in 2018] who were admitted to emergency room of Farshchian Heart Center between April 2016 and December 2018 underwent invasive approach, consecutively. Standard radial approach has been used as a default. In hospital mortality was assessed.
Results: The mean age of the patients was 60.5 years old (between 32 and 93 years old). The 53.5% of them were male. On admission, the mean duration of onset of symptoms to hospital arrival was 204±156.2 minutes. The mean Door - To - Device was 78.2 minutes and the average time between ECG verification of STEMI to device time was 61.8 minutes. Stent deployment was performed in 1112 (86.46%) cases and the rest of them either were candidated for CABGs or didn't require any intervention. All-cause mortality occurred in 4.18% (4.36% in 2016, 4.9% in 2017, and 3.29% in 2018) and PPCI mortality happened in 1.71% (1.58% in 2016, 2.3% in 2017 and 1.25% in 2018) of patients.
Conclusion: In compare to other previous studies, the result of PPCI in our center was amazing. PPCI is feasible and efficient in STEMI patients with good out come.

Total ischemic time for primary percutaneous coronary intervention (P.PCI) in patient with ST segment elevation myocardial infarction (STEMI) in Fasa Vali-asr hospital 2016-2017

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Background & Objective: STEMI is important cause of death in Iran. STEMI requires urgent reperfusion, nowadays P.PCI has become preferred treatment for STEMI. By implementing STEMI management strategy, the hospitals provide the necessary services 24 hours a day and seven days a week (247plan). Since the Vali-asr hospital Fasa is a member of 247 plan, we estimate total ischemic time, comparing it with gold standards, reviewing the present status.
Material & Methods: This study was designed a case series study which involved 156 STEMI patients who underwent PPCI at Vali-asr hospital -Fasa-Iran in year 2016-2017. we recorded onset of chest pain, kind of presentation, first call for help, admission time, first STEMI ECG, verification time, 247 code time, Cath lab interval.
Result: Among 156 STEMI patients, 37.8% patients arriving by emergency medical services (EMS), 20.3% of them receive reperfusion therapy in less than standard total ischemic time (<120min). The median door-to-balloon time was about 177 minutes. The onset of pain-call for help interval was 3.5 hours.
Conclusion: Strategies to reduce total ischemic time should include attempts to reduce DBT and to enhance ambulance-hospital communication. Fast-tracking STEMI patients from the field directly to the Cath lab can reduce overall treatment delays. We observed that onset of symptoms-call for help was longer than golden time, so Health care professionals should heighten the level of awareness of patients at risk for STEMI.
Key words: STEMI, total ischemic time, door-to-device time, EMS, P.PCI

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Comparison of Oral and Intravenous administration of Midazolam injectable solution in Patients Undergoing Trans Esophageal Echocardiography

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Background: Due to high costs and low availability of oral midazolam In our region, we decided to compare sedative effects of IV and oral administration of midazolam injectable solution.

Methods: In this clinical trial,100 TEE candidates were equally divided into IV and oral sedation groups after obtaining informed consent. Demographic and clinical data were recorded. After administrating the drug for each patient, sedation was evaluated in the form of movement score, sleep score, overall patient behavior, degree of amnesia and wakefulness in one hour.
Results: The mean age of oral and IV groups were 52.56 ± 17.53 and 49.48 ± 18.05 years, respectively. 48.5% of men and53.1% of women were sedated orally. The difference between the groups was not significant in terms of age group, gender and electrocardiographic abnormalities($p< 0.05$). Patients' movement score ($P = 0.833$), sleep score($P = 0.342$), general behavior($P = 0.577$), amnesia ($P = 0.366$) and wakefulness after one hour ($P = 0.646$) were not significantly different between the two groups even after matching for age, gender and electrocardiographic abnormalities.
Conclusion: Midzaolam injectable solution has similar sedative effects whether administered IV or orally in patients undergoing TEE and both sedation methods could be used in such patients.
Keywords: Midazolam, Trans esophageal echocardiography, movement, sleep, behavior

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Determining the premature coronary artery disease risk factors according to different ethnicities and religions in Iran and developing a biobank for epigenetic studies (Iran- premature coronary artery disease: I-PAD study)

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Background: Coronary artery disease is one of the most important causes of mortality. The prevalence of premature coronary artery disease (PCAD) is increasing. So we aimed to determine the PCAD risk factors according to different ethnicities and religions in Iran.
Methods: This case control study will be conducted on about 7,000 individuals from different ethnicities (such as Persian, Turk, Kurd, Arab, Lor, Bakhtiari, Baluch, Turkman, Qashqai, Gilak) and religions Muslims, Jews, Christians, and Zoroastrians. Variables such as ethnicity, religion, age, sex, socioeconomic characteristics, physical activity, history of smoking, dietary habits, and family history will be collected. Blood samples will be evaluated for fasting blood sugar and lipid profiles.
Results: The number of patients whose data were collected by March 2019 was about 500. Most of them are Persian. Also, we collected data from about 50 Bakhtiari patients. Samples of serum, plasma, buffy coat, whole blood, urine, stool, and saliva were frozen for establishing a biobank.
Conclusion: In order to provide a valuable source of data, I-PAD study was developed in Isfahan. Recruitment in the pilot and feasibility phases was successful. The data of this study could be used for future genetic and epigenetic researches.
Keywords: Premature coronary artery disease, Ethnicity, Religion

Evaluation the Quality of Life Before and After ICD Implantation in Patients with Heart Failure

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Background: Decline in quality of life in patients with heart failure, causes the severity of their diseases. ICD is the treatment of these dysfunctions in terms of indication. ICD can affect patient's quality of life. The aim of the present study is to assess the patient's quality of life before and after ICD.
Methods: This study was investigated in 36 patients candidate for ICD implantation who referred to Qazvin Bu-Ali Sina hospital. Patients were selected with available sampling method. Minesuta quality of life scale and personal information questionnaire were data collection tools. Data analyzed with descriptive statistics and statistical tests such as paired t test and Pearson correlation test in SPSS v21.
Results: The results of the present study showed that the quality of life in general and total aspects, before and after ICD implantation in patients with functional classes 1 and 2 were significantly high (p=0.000), but this increasing was only in total aspect of quality of life in patients with functional class 3 after ICD implantation (p=0.012). The results totally showed that the general and total aspects of quality of life after ICD implantation positively altered which were significant (p=0.000).
Conclusion: Results showed that the quality of life in patients before ICD implantation in all aspects were low. The general and total aspects of quality of life were increased significantly after ICD implantation.
Key Words: Heart failure, Implantable Defibrillators, Quality of life

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Evaluation of PAC and PVC frequencies in Holter Monitoring and Their Association with Biventricular Pacing Percentage in Cardiac Resynchronization Therapy Candidates

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Background: In order to have favorable outcome in patients with CRT, the high percentage of biventricular pacing is needed, but improving the knowledge of success in biventricular pacing from the ectopic beats' effects is noticeably needed. This study sought to determine whether increased ectopic beats reduce the chance of high biventricular pacing percentage and are associated with subsequent adverse outcomes.

Methods: Fifty patients were enrolled in this Descriptive-Analytic study who were candidate for CRT-defibrillator implantation. They got pre-implantation 24-h Holter recordings then we estimated the influence of ectopic beats on the percentage of biventricular pacing after implanting CRT-defibrillator device with data available on biventricular pacing percentage using logistic regression.
Results: Patients were 38 to 86 years old (mean=67) and 62% were male. In the pre-implantation Holter recording, ectopic beats accounted for a mean 0.6±0.14% of all beats. The probability of subsequent low biventricular pacing percentage (<95%) was increased in patients with >1.5% ectopic beats compared with those with ≤ 0.1% ectopic beats. (OR: 5.00; 95%CI: 1.44-17.27; $p < 0.001$)
Conclusion: It has been noticed that a relatively high frequency of ectopic beats (>1.5%) can dramatically increase the probability of low biventricular pacing (<95%) which lowers the efficacy of CRT. This supports pre-implantation Holter monitoring of patients selected for CRT for optimal outcome. This also underlines the possible need of treatment of these ectopic beats for patients that have had CRT.
Key Words: Cardiac Resynchronization Therapy, Premature Cardiac Complexes, Ambulatory Electrocardiography

The Effects of the Family-Centered Empowerment Model (FCEM) on of Patient's Self-Care and Family Caregiver's self-efficacy and self-esteem Among the of Patients with Prosthetic heart Valve: a Controlled Clinical Trial.

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Background: Patients with heart valve disease need to receive long-term care from their family members after surgical valve replacement.
Objectives: This study examined the effects of FCEM on patient's self-care also self-efficacy and self-esteem among the family caregivers of patients with prosthetic heart valve.
Methods: In this controlled clinical trial, forty patients together with one of their family caregivers were conveniently recruited and allocated to an intervention or a control group. The FCEM was applied in three to five sessions for patients in the intervention group. Besides, we sent their family caregivers educational cards containing the same educations provided to their patients. Finally, an educational session was held for family caregivers in which their questions were answered and each of them was provided with an educational booklet containing the same materials as the educational cards. Patients and their family members in the control group received routine care. Patient's self-care with Self-efficacy and self-esteem of family caregivers were assessed before, one week, and 1.5 months after the intervention. Data analysis was performed via the independent-samples *t-test* and the repeated-measures analysis of variance.
Results: The average of self-care scores in experimental and control groups in terms of knowledge was respectively 49.42±5.77 and 50.58±9.09,in the emotional area: 17.53±3.43 and 17.26±3.29 and in the functional area:51.58±6.03 and 53.84±8.68; no significant difference was observed between the two groups, but after intervention, the average of self-care scores in the experimental and control groups in terms of knowledge was respectively 60.11±2.97 and 51.95±7.38, in emotional area: 22.32±3.001 and 18.32±5.513 and in the functional area: 63.63±5.11 and 53.11±7.45; significant increase was observed in self-care scores (p=0.05). In family caregiver before the intervention, the mean scores of self-efficacy in the control and the intervention groups were 26.68 ± 4.79 and 26.79 ± 5.49, while the mean scores of self-esteem in these groups were 33.74 ± 4.55 and 33.84 ± 4.72, respectively. None of these between-group differences were significant. After the intervention, the mean scores of self-efficacy and self-esteem in the intervention group were significantly greater than the control group (37.32 ± 2.68 vs. 29.89 ± 2.20 and 36.26 ± 3.66 vs. 29.26 ± 5.84; $P < 0.05$).
Conclusion: The applied FCEM improves self-care in patients and promotes self-efficacy and self-esteem among the family caregivers of patients with prosthetic heart valve.
Keywords: Family-Centered Empowerment Model (FCEM), Caregiver, Nurse, Prosthetic heart valve, self-care, Self-efficacy, Self-esteem

The relationship between social support and beliefs about medication in patients post coronary angioplasty (a descriptive- correlational study)

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Introduction: Coronary artery disease is a leading cause of mortality In Iran. Patients' beliefs can play an important role in their compliance with the medication adherence. One of the effective factors in patient beliefs is social support. This study aimed to investigate the relationship between social support and beliefs about medication in patients post coronary angioplasty .
Methods: This study was a cross-sectional, descriptive-correlational study. a total of 150 eligible patients participated in this study. Samples were taken using convinience sampling method from patients who referring to the Cardiology Clinic of Tabriz University of Medical Sciences on March to July 2018.The questionnaire included demographic characteristics, BMQ-S questionnaire and the Berlin social support questionnaire (BSSS) .
Results: 90% participants consider that medications are necessary, this is while 96% have expressed concern about medication. Eight percent of the participants reached the acceptance stage(high necessary-low concern).While,76.7% of participants were ambivalent about medication therapy. Pearson correlation showed that there was a significant relationship between medication belief and social support. By increasing social support, the medication belief is significantly increased.
Conclusion: Nurses and family members can increase patient's beliefs about the necessity of taking medications by supporting them and reducing their concern. Thus provide conditions for medication adherence in patients undergoing coronary angioplasty .
Keywords: medication beliefs, social support, coronary angioplasty

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Medication Adherence and it's Predictors in Patients Post Coronary Angioplasty

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Introduction: Multiple factors contribute to medication adherence in patients with chronic conditions and adherence rates vary in various populations. The purpose of this descriptive-correlational study is to investigate medication adherence in a sample

of Iranian patients after coronary angioplasty (CA) and identify the predicting factors based on the WHO framework.

Method: A total of 203 patients post CA were recruited from outpatient cardiology clinics in Tabriz between November 2017 and February 2018. Data were collected on sociodemographic characteristics and the Persian version of Morisky Medication Adherence Scale (MMAS) and Charlson Comorbidity Index .Multi-linear regression analysis was performed to examine the predictors of medication adherence in this patient group.

Result: Only 32.0% of patients had high adherence while 22.2% and 45.8% had moderate and low adherence respectively. In hierarchical multiple regression, side effects of medications (B=-1.094, 95% of CI=-1.700--0.489, P<0.001), recall (B=0.658, 95% of CI=0.153-1.163, P=0.011)and hospitalize history due to current disease (B=-0.537, 95% of CI=-1.031--0.043, P=0.033) significantly explained 13.6 percent of variance of medication adherence.

Conclusion: Patients post CA have low medication adherence. Factors predicting medication adherence included side effects of medications, forgetfulness, and previous hospitalizations. These results suggest that interventions to improve medication adherence in Iranian patients post CA should focus on patient education and involvement of family members in care of patients.

Keywords: medication adherence, coronary angioplasty

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Examining the Relationship Between Illness Perception, Medication Adherence, and Readmission in Patients with Heart Failure.

Atefeh allahbakhshian

Background: In spite of the advancement in heart-failure (HF) treatment, readmission of patients with this illness still imposes a heavy burden on the health system by increased treatment and care costs.

Objectives: The purpose of this study was to examine the relationship between illness perception (IP), medication adherence (MA), and readmission during 30 days after discharge in chronic heart-failure patients.

Materials and methods: The study was descriptive-correlational where 360 patients - with heart failure were selected using convenient sampling. This study was conducted between 22 July 2016 and 22 2017 in the Shahid Madani teaching hospital affiliated to the Tabriz University of Medical Sciences, Iran. The tools used in the study were demographic questionnaire, Brief Illness Perception Questionnaire (BIPQ), Medication Adherence Report Scale (MARS), and readmission study 30 days after discharge by telephone and receiving a “yes” or “no” answer. Significance level was less than 0.05.

Results: The results showed a significant direct correlation between illness perception and medication adherence (r=0.196, P<0.001). There was no significant relationship between illness perception (p=0.199) and medication adherence (p=0.602) with readmission 30 days after discharge (P> 0.05). Mean and standard deviation of IP and median (IQR: Interquartile Range) of MA were 45.45 (9.3) and 5 (1) respectively.
Conclusions: Nurses can use the results of this study to identify patients at high risk of non-adherence to medication regimens and readmission.
Keywords: heart failure, illness perception, medication adherence, readmission

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Effect of Foot Reflexology on Agitation and Extubation Time in Coronary artery Bypass Surgery Patients During the Weaning of Mechanical Ventilation: a Single Blind Randomized Clinical Trial

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Introduction: Controlling and relieving acute post-operative complications after cardiac surgery is one of the nurses' vital role in ICU. In recent years, research has emphasized the use of non-pharmacological complementary medicine and alternatives to reduce patients' complications. The purpose of this study was to investigate the effect of foot reflexology on agitation and mechanical ventilation weaning time in the patients following coronary artery bypass surgery.
Methods: This was a single blind, three-arm, parallel-group, randomized controlled trial. There were 120 male patients undergoing CABG were placed in 3 groups named intervention, placebo and control. The variable of agitation was measured before intervention, immediately after it and 10 minutes after it was done. The variable of mechanical ventilation weaning time was measured from the moment the intervention started (patients' full consciousness) until the endotracheal tube was extracted.
Result: the results showed that feet reflexology massage had a significant effect on reducing agitation and extubation time in intervention group (P<0.05).
Conclusion: foot reflexology might be used as an operational supplementary method in ICU in order to reduce agitation and mechanical ventilation weaning time in patients following coronary artery bypass.
Keywords: foot reflexology, agitation, extubation time, coronary artery bypass graft, nursing

Study of Risk Factors for Cardiovascular Diseases and the Relationship Between Knowledge and Preventive Behaviors of Cardiovascular Diseases in Patients Referred to Kowsar Hospital of Sanandaj

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Backdround: Cardiovascular diseases are the most important causes of disability and death in the world. Several factors such as high blood pressure, high blood fat, overweight and obesity, physical inactivity, stress, inappropriate diet, irresponsibility, etc. are involved in cardiovascular disease. The purpose of this study was to evaluate the risk factors for cardiovascular diseases and the relationship between prevention awareness and prevention behaviors in patients referred to Kowsar Hospital of Sanandaj.
Methods: A cross-sectional descriptive-analytic study was conducted on 60 patients referred to Kowsar Hospital in Sanandaj. The method of scaling is multistage clustering. Data collection was done by the Walker Health Promotion Lifestyle Inventory. Data was analyzed using SPSS version 25 using descriptive and analytical tests such as Pearson correlation test, ANOVA One-way, Kruskal Wallis and Spearman were analyzed.
Results: The mean age of the subjects was 51.7. Inappropriate nutrition (84%) and physical inactivity (84%) and stress (75%) were the most common risk factors for cardiovascular disease. there was Significant association between knowledge and nutritional behavior And knowledge and physical activity according to the Pearson and Spearman tests.
Conclusion: The results showed that increasing knowledge is related to preventive behaviors of cardiovascular diseases, so increasing information and interventions can be effective.
Keywords: knowledge, preventive behaviors, risk factors, Cardiovascular diseases

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Family Caregiving Requirements for Children with Congenital Heart Disease: A Qualitative Study

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Background: Congenital heart disease is the most common congenital defect. These children require physical, emotional, and social care in their life, and family is the primary responsible of caregiving. Family members can play an effective role in well-

being and support of the child. Providing quality care for children requires understanding the situation and requirements of family for care. This study aimed to explore family caregiving requirements for children with congenital heart disease.

Methods: This content analysis qualitative study was conducted in Mashhad University of Medical Sciences, Iran in 2018 on family of children with congenital heart disease, through in-depth semi-structured interviews held with 36 family members of children with congenital heart disease selected through purposive sampling. Interviews continued until saturation of data. All interviews were recorded, transcribed and analyzed through conventional content analysis. MAXQDA 2007 software was used to classify coding.

Results: According to the content analysis, the main theme was effective caregiving requirements that included four categories: caregiving knowledge, social and financial support, effective interactions, and necessary caring skills.

Conclusion: The results of this study may help health care professionals in understanding family caregiving requirements to provide supportive and educational packages for families until improving quality care for children.

Key words: congenital heart disease, care, children, family

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Evaluation of Anxiety, Stress and Depression in patients with congestive heart failure

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Background: Although psychological factors are now recognized as playing a significant and independent role in the development of congestive heart failure(CHF) and its complications, many of these factors are correlated with each other. The present study is aimed to evaluate Anxiety, Stress and Depression in patients with congestive heart failure.

Materials And Methods: In this research 68 patients with congestive heart failure (46 females and 22 males) from the city of Jahrom were selected using random sampling. The tool used included depression, anxiety, and stress scale (DASS-21). analyzed using structural equation modeling by using the Statistical Package for Social Science (SPSS21).

Results: A total sample of 68 patients with CHF were evaluated: 8.6% were single, 80% married and 11.4% were widow. The participants obtained a mean score of 4.66 ±2.93 for depression, 5.22 ± 2.72 for anxiety and 5.54 ±2.33 for stress. Significant relationship was found between depression ,stress and anxiety (p=0.0001).

Conclusions: This study showed that majority of CHF patients were suffered from mild to moderate depression , anxiety and stress.

Keywords: Anxiety, Depression,Stress, Congestive Heart Failure.

Effects of Obesity on Ecg Pattern in Premenopausal Women Compared To Postmenopausal Women

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Background: Obesity and menopause are important cardiovascular (CV) risk factors. In post-menopausal women, the protective effect of estrogens is reduced and menopause is frequently related to occurrence of significant cardiovascular factors including obesity. This study evaluated the obesity effects on the QRS complex in pre- and post-menopausal women.
Methods: This study was analyzed of 190 electrocardiograms of pre- and postmenopausal women in relation to the body mass index (BMI) within normal limits (20 to 24.9 kg/m^2) and obesity (>30 kg/m^2).
Results: In pre-menopausal women and menopause, obesity significantly affected both the electrical axis (EA) and maximum QRS spatial vector magnitude (QRSmax). The highest QRSmax and EA values were observed in pre-menopausal lean women, and they were significantly higher as than in the pre-menopausal obese women, post-menopausal lean and obese women (QRSmax: 1.69±0.4 mV, 1.15±0.32 mV, 1.45±0.36 mV, and 1.33±0.36 mV, & EA: 57.4±18.0°, 36.22±18.28°, 47.82±18.53°, and 34.75±17.51°, resp.).
Conclusion: Obesity in pre-menopausal women had remarkable effect on QRS complex that might be attributable to the hormones dysregulation in combination with the CV risk factors. Obesity effects on QRS in obese premenopausal women was comparable to the resultant effect of postmenopausal status, age and increasing occurrence of CV risk factors in menopause.
Keywords: obesity, menopause, QRS complex, cardiovascular risk factors

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Evaluating the Effectiveness of the Educational Program Based on Trans-Theoretical Model in the Promotion of Physical Activity and Improving the Nutrition Among the Offsprings of Diabetic and Hypertension Patients

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Background: Reducing physical activity and excessive consumption of fats, meat, salt, sugar, and smoking a stressful life has increased the incidence of non-communicable

diseases. The purpose of this study was to investigate the effect of education on improving physical activity and improving the nutrition of children, hypertensive patients and diabetes based on the Trans-Theoritical Model.

Methods: This research was a pre-and post theory-based interventional study. The sample size was 180 people and they were selected by multi-stage sampling and the first, the questionnaire for measuring demographic variables and constructs of the change stages model were completed as self-report, Then he received training needs based on the theory in three sessions, with emphasis on physical activity and healthy diet. After six months to evaluate the intervention, the above questionnaires were completed again. Data were analyzed $SPSS_{18,}$ using descriptive statistics and t-test, correlation, Chi-2 and Mann-Whitney tests.

Results: The mean age in the control group was 41.43 ± 17.57 and in the experimental group was 41.65 ± 15.85. The status of marital status in the two groups was statistically significant. There was no significant difference between other demographic variables and anthropometric indices. In the pre-training stage, 74.1% of the all people preferred to walk that after the intervention, the test group preferred other exercises, including swimming, climbing, exercise with a fitness machine. Based on the results, there was a significant relationship between education and the stages of behavior change, but there was not a significant relationship between age and behavioral stages in improving nutrition in the studied population. Measuring the structure of the stages of change before intervention showed that a high percentage of patients were 83.33 in the experimental group and 72.22 in the control group in terms of nutritional behaviors in the preoperative stages (pre-thinking, thinking and preparation). After intervention, there was a significant difference between the two groups, so that most of the subjects were in the experimental group during the operation or maintenance phase.

Conclusion: What is evident at the end of the research, the design of interventional programs based on meta-analysis models will promote and improve appropriate health behaviors.

Keywords: Physical Activity, Hypertension, Diabetes Mellitus, Non-Communicable Diseases, Nutrition Sciences.

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Medication adherent and its predictors in coronary angioplasty patients referring to the Cardiology Clinic of Tabriz University of Medical Sciences in 1396

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Introduction: medication Adherence prevents recurrence of coronary artery disease. Several factors can affect it. Therefore, this study was conducted to determine the medication adherence and its predictors in patients undergoing coronary angioplasty.

Methods: This study was a cross-sectional descriptive-correlational study. Convenience sampling method was used for selecting eligible Participants from patients who referring to the Cardiology Clinic of Tabriz University of Medical Sciences on March to July 2018. The questionnaire used in this study included several parts including demographic characteristics, the 5-item MARS questionnaire and BMQ-S questionnaire.
Results: The mean age of participants was 59.99(SD = 12.80). The most of patients participating in the study were male (78.7%), married (89.3%), and the illiterate (30.7%). There was a significant relationship between medication beliefs, hospitalization history due to current illness, male sex, education, and spouse education ($p<0.001$). But there was no significant relationship between medication adherence and marital status, blood pressure and its managing history, diabetes, CABG and coronary angioplasty.
Conclusion: Nurses and family members can contribute to patient's beliefs in hospital. Also in order to provide better adherent they can provide relevant education with regard to the patient education levels.
Keywords: medication adherence, coronary angioplasty, nursing, predictors

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The relationship between social support and medication adherence in patients post coronary angioplasty (a descriptive- correlational study)

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Introduction: Medication adherence is one of the most effective factors in preventing recurrence of coronary artery disease. Since patients are part of family and society, social support can be one of the factors influencing their adherence. The aim of this study was to investigate the relationship between social support and medication adherence in patients undergoing coronary angioplasty.
Methods: This study was a cross-sectional, descriptive-correlational study. Participants were selected from eligible patients who referring to the Cardiology Clinic of Tabriz University of Medical Sciences on March to July 2018, by convenience sampling method. The questionnaire used in this study included three parts. Demographic characteristics, MARS questionnaire, and Berlin Social support questionnaire (BSSS).
Results: The mean age of participants was 56.99(SD = 12.80). The majority of patients were male (78.7%), married (89.3%), and illiterate (30.7%). The social support score was good. The majority of participants (n = 105) did not adherent to medication.

Pearson correlation showed that there was no significant relationship between medication adherence and social support. There was a significant relationship between demand for support dimensions of social support and medication adherence (P<0.001). This means that when a person needs more demands for social support, his/her adherence increases.

Conclusion: Nurses and family members have a high level of support for patients undergoing coronary angioplasty. Also patients had high medication adherence too. Therefore, a study with higher sample size is recommended to investigate the relationship between these two variables.

Keywords: medication adherence, Social support, Coronary angioplasty

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Illness Perception in Cardiovascular Patients

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Background: Illness perception is an organized representation of the patients' beliefs that they have about their disease, which is significantly different from the medical staff and other patients and is defined as a completely unique opinion that six components designated for it. Identity, Cause, Consequences, Control /treatment ability, Coherence.

Methods: In a descriptive cross-sectional study, 136 cardiac patients were selected by available sampling method and illness perception was assessed by Brief illness perception questionnaire. And the data were analyzed descriptive statistics.

Results: Patients reported components of illness perception as follows: Consequences (6.25±3.51), timeline: (4.93±3.14), personal control (6.22 ± 3.28) and treatment control (8.31 ± 2.04), identity (2.91±3.03), concern (7.06 ± 3.31), coherence (2.73±3.29) and emotional manifestations (4.66±3.18).

Conclusion: cardiac patients have perceived the illness with its moderate consequences; they believed their illness wasn't chronic and control ability was moderate and treatability was high; and their illness isn't severe, they were concerned and knew very little about it, and their emotional representation of the illness was at a moderate level. So, patients do not have a proper perception about their illness in all components and it should be improved and corrected with appropriate interventions such as education and counseling.

Key words: cardiovascular disease, illness perception, cardiac patient

Nursing Informatics: A New Concept

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Introduction: Nursing Informatics (NI) has defined its practice as the specialty that integrates nursing science with multiple information and analytical sciences to identify, define, manage, and communicate data, information, knowledge, and wisdom in nursing practice. Nursing informatics supports nurses, consumers, patients, the inter-professional healthcare team, and other stakeholders in their decision making in all roles and settings to achieve desired outcomes [1]. In this paper, we explain major elements of NI, and main barriers to success as a nurse Informatics.
Nurse informatics has different roles and responsibilities in healthcare, each bringing value to the provision of patient care. Identified responsibilities of nursing informatics [2] include analyze both clinical and financial data, endorse and facilitate resource and reference access, deliver nursing content to standardized languages, improve continuity of care, enhance relationships between providers and patients, support cost savings and goals for productivity, and redesign clinical workflow.
Objectives: Nowadays, Dynamic health systems based on IT technology play an important role in improving quality of education and nursing care. The key elements of nursing informatics implementation were considered as healthcare promotion, advanced systems, internet and network. The foundation of nursing informatics is based on the concepts of data, information and knowledge. Because information and knowledge are essential for nurses when interpreting data and making decisions, it is important to know the difference between these concepts data are discrete observations that are not interpreted, organized or structured. Information is data that has been interpreted, organized or structured to provide meaning to the data. And knowledge is the synthesis of information to identify relationships that provide further insight to an issue or subject area. When you think about it, these concepts are the building blocks of all nursing communications. Nurses collect data when assessing and monitoring the health of clients and record their observations in the client's chart; they exchange service requests to, and receive results from, the clinical laboratory and radiology departments; they receive and review admission data and discharge summaries; they review information on the results of clinical trials; they communicate client information between service providers; they summarize, calculate and interpret work- load indices for their nursing unit for monitoring and management purposes; and they consult evidence-based clinical guidelines and protocols to guide their practice. As knowledge workers, nurses use sources such as these to influence decision-making.
Method: In Nursing Informatics Systems, nurses evaluate their tasks and interested into their plans. They use the Internet, digital instruments and computers to improve their performance. The use of documentation is one way for the members of hospital

information system to communicate with each other that help every nurse, doctors or other medical personnel aware of the operations on patients at different times. This model reduces complexity and management with self-managing. The Nursing Informatics model addresses nursing practice challenges; and mentions Electronic Health Records, Patient Monitoring Systems, bar code medication administration, computerized provider order entry, data capture tools, care planning tools and E-health, and the need to consider nursing shortage, reducing medical errors especially in critical cares, improve tracking of patient data, improve efficiency of data collection and improve access to cares. These are ways to address nursing education challenges: E-learning to deliver education, simulation to deliver education, inclusion of Health Care IT in curricula, and faculty development for health care. Analysis and design of technical infrastructure such as standard and appropriate communication links and preparing road map are good ideas to address mentioned technical challenge.

Main barriers to success as a Nurse informatics include administrative support, staffing resources, organizational strategic plan, financial resources, technical infrastructure, time management, and software architecture and design.

Results: Nursing Informatics Systems improve performance factors such as scalability, reliability, response time, functionality, and efficiency. It also facilitates management, controls of the entire system and addresses these goals by adopting a three pronged approach:

Access – better connectivity in work environment, more access to a variety of computer technologies, e.g. PDAs, hardware, software, station computers.

Competency- ongoing ICT skill development, integration into nursing curriculum

Participation - "as knowledge workers in this technological age, it is essential that nurses play an increased role in the development of ICT solutions.

Conclusion: Nurses have the most communication with patients, and interact with technology more frequently. Using technology should create a positive attitude in nursing productivity. For successful implementation of the electronic health reporting system, nurses must be knowledgeable about information technology, computer skills and informatics knowledge and skills. In e-health especially tele-nursing, the importance of data quality criteria, transparency and integrity, authenticity, confidentiality, the updating of information, accountability, productivity, standards and accessibility of health web sites should be considered. Main challenges of Nursing Informatics Implementation are educational and technical communication Infrastructures. The benefits of extending nursing informatics strategies directly and indirectly influence patient and people health positively.

Key Words: Nursing Informatics, Information Technology (IT), E-health, Tele-Nursing, Computer Sciences.

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Peripartum Cardiomyopathy in Pregnant Women Heart Center Case Series Report

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Tabriz cardiovascular research center, Shahid Madani Heart Center, Tabriz medical science university

Background: peripartum cardiomyopathy is the form of dilated cardiomyopathy. It usually occurs in the last month of pregnancy until about five months after delivery. Congestive syndrome with decreased systolic dysfunction and reduced left ventricular ejection fraction and associated atria or ventricular arrhythmias. The possibility of an embolism and sudden death in this disease is high. The main cause of this illness is unknown and the underlying causes are: Obesity, family history of myocarditis, smoking , alcohol, multiple pregnancies, Malnutrition, Twin pregnancy, age over 30 years. Symptoms: fatigue, palpitation, nocturia frequently, dyspnea, edema, swelling, orthopnea, shortness of breath while lying down, weight gain more than one to two kilograms a week, chest pain.

Methods: This is a case series study of all pregnant women admitted to the hospital Because of the cardiomyopathy within a year.

Results: During the year, 7 cases of admission were due to cardiomyopathy. No maternal and fetal death was reported. Which represents the timely treatment of various medical teams at the center

Conclusion: Pregnancy and heart disease are two of the most threatening categories of life. Early detection and basic action in this regard is very important

Key words: peripartum cardiomyopathy, pregnant women

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Seasonal and Gender Pattern Analysis with the Prevalence of Myocardial Infarction in Imam Reza Hospital, Urmia The names of the authors

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Background: Acute myocardial infarction is one of the most common diseases worldwide and is the first cause of death in Iran. It has been convincingly shown that cardiovascular disease does not occur accidentally during the day, week or year. Seasonal variations in some cases cause the severity of the disease and even death. Sex is a major contributor to cardiovascular disease.

Methods:A comparative descriptive study was performed on 104 patients (44 males and 60 females) with myocardial infarction in Imam Reza Hospital of Urmia in the

second half of 1396 and the first six months of 1397. Data was evaluated by spss version 21 software.

Results: Of the 1,402 cardiac patients admitted to the ccu and emergency departments, 104 had a heart attack, with the highest incidence of myocardial infarction in the second six months of 1396 with 7.5%, of which 30 (18 women, 12 men) had a related heart attack The fourth quarter of 1396, the winter season. In the second six months of 1396, the incidence of myocardial infarction was 50% in both sexes.

Conclusion: In the summer, most cases of heart attacks were reported by men and in winter most cases were related to women. Therefore, attention to the seasonal pattern and training in this field is very necessary.

Keyword: Gender Pattern, Myocardial Infarction, Seasonal pattern

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Prevalence of obesity among over 18 year olds in Qazvin province in 2015

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Introduction: Obesity is an important health determining factor. It is a part of metabolic syndrome and related to some serious diseases such as hypertension, diabetes and coronary heart disease.

Methods: In total ,470 over 18 years old, Through systematic proportional to size cluster random sampling.They were studied through a questionnaire about risk factors such as diet , smoking, Blood pressures , Body Mass Index was determined and BMI>=30kg/m2 detected as obesity.

Results: BMI mean) 25.62 kg/m2 (men) =27kg/m2 [CI=(25 , 26.27 95%)] (women)= 28.53 kg/m2 [CI= 27.79 , 29.28 95%)].
Distribution of obesity (25.64 %) mean (men) =16.1% [CI11.32% , 20.88 95%)] (women 35.24% [CI= 28.8 , 41.68 95%)].

Conclusion: Among obese people all factors prevalence for uncommunicable diseases were higher than general population .This emphasises on severe intervention planning about overweight and obesity reduction .

Keywords: obesity , risk factors, nun communicable, Qazvin

Effect of Cardiac Rehabilitation on Sexual health among Patients after Open Heart Surgery

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Purpose: The present study aimed to investigate the effect of Phase 2 cardiac rehabilitation (CR) on the level of Sexual health among post open heart surgery patients.
Methods: A clinical trial was performed among 104 post open heart surgery patients were participated into the study. The partients were randomly assigned to the intervention group (n=52) or the control group (n=52). The intervention group received 20 sessions of Phase 2 CR for 8 weeks, whereas the control group received the routine hospital care. The data were collected using the demographic and Larsson's *sexual* Satisfaction questionnaire before and after the study in the groups.The data were analyzed using the SPSS software (version 23) with the independent sample *t* test, paired samples *t* test, and Chi-square test. The significance level of this study was 0.05.
Results: There was no statistically significant difference in the mean pre-intervention score for Sexual health between the groups. However, a statistically significant difference in the mean post-intervention score for Sexual health was observed between the groups (P<0.001). The difference in the mean pre- and post-intervention scores for Sexual health in the intervention group was statistically significant (P<0.001), whereas there was no significant difference in the control group (P=0.074).
Conclusion: Those post open heart surgery patients who completed the CR program experienced an increased level of Sexual health. It is, therefore, recommended to include a CR exercise program as part of patients' treatment and after care to improve their Sexual health level.
Keywords: Cardiac Rehabilitation, Open Heart Surgery, Sexual health

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The effect of Self-care education on the level of depression in patients with angina pectoris

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Background: Angina is a clinical syndrome that is usually characterized by repeated attacks of pain and pressure in the anterior chest wall. Depression is the cause of cardiovascular disease, And heart disease also creates the same responses to create

psychological factors Therefore, we decided to investigate the effect of self-care education on depression in patients with angina pectoris

Methods: This study is a experimenta on performed 60 patients with Angina at Hospital in Qaen city in 1396.During this study Beck Depression Inventory was completed before and Two months after the intervention. the information through the 19Spss software And analyzed by Chi-Square And Pair T-test

Results:The results of the study showed that the two groups were homogeneous in terms of demographic variables and there was a significant difference between the mean of depression scores between the two groups after the intervention as well as the intervention group before and after the intervention ($P < 0.05$)

Conclusion:self care training is effective in improving depression in patients . They should be included in the care of the medical staff in order to ensure that the duration of stay and the possibility of patients returning to the hospital are prevented And add to their quality of life

Keyword :Angina pectoris, self-care, depression

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Effectiveness of Continuous Care Model on Self-care in Patients with Heart Failure: A Semi-Experimental Study of the Type Before and After the Randomized Control Group

Fatemeh Rezamand*, Shahnaz Rezamand, Mahshid Ahmadian, Ramesh Hoseinkhani

Background and Aim: Self-care behaviors are one of the most important determinant factors in the prognosis of heart failure Which can improve the symptoms of the disease, function and reduce ortality in these patients. The aim of this study was to determine the effectiveness of follow-up care model on self-care in patients with heart failure hospitalized in Shahid Chamran Hospital in Isfahan

Materials and Methods: This quasi-experimental study was performed on 72 patients with heart failure who were admitted to Shahid Chamran Hospital in Isfahan. The selected subjects were randomly assigned into experimental and control groups (each group was 36). For three months, a follow-up care model was implemented and the self-care score of patients with heart failure in both experimental and control groups was compared before and after the intervention. Data were gathered using a demographic questionnaire and a European standard questionnaire for self-care behaviors in patients with heart failure (EHFSCB). Data were analyzed by SPSS software version 20 and analyzed by Chi-square, Mann-Whitney, independent t-test, paired T-test, Pearson correlation and Spearman correlation at a significant level of $\alpha = 0.05$.

Results: According to the results of the follow-up care model, the average self-care score before the implementation of the follow-up care model was 28.2 ± 2.52 in the experimental group and 29.5 ± 3.7 in the control group, which was statistically

significant There was no significant difference in pre-intervention scores between the two groups (P = 0.22). However, after implementing a follow-up care model, the mean self-care score of the experimental

Keywords: Heart failure, Self-care behaviors, Continuous care

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Investigating the Effect of Artificial Airway Open air Suction Based on Comprehensive Criteria Needed for Suction on the Patients Cardiac Criteria Admitted to ICU

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Background: Regardless to cardiac criteria, airway suction is an ongoing process. This study investigates the effect of artificial airway suction with comprehensive criteria needed for suction on the cardiac criteria of ICU patients.
Materials and Methods: A randomized clinical trial through pre-posttest with control group was performed on patients with synthetic airway attached to a mechanical ventilation device in educational hospitals of Zanjan Medical Sciences University. Easy sampling was done, then randomly divided into two groups of 30 people. The data collection tool was designed by the researcher. The required suction was assessed on comprehensive criteria and control group. The standard suction was performed. Before and after suction, heart rate variables were measured, systolic and diastolic blood pressure and heart rate data were analyzed with SPSS.
Results: 3 cardiac criteria mean between two groups 2 and 5 minutes after intervention was not significant. Only DBP had a significant difference during suctioning sessions.
Conclusion: Considering the comprehensive criteria for suctioning to prevent the airway suction complications and patients cardiac condition stability under ventilation is essential.
Key words: Artificial Airway Suction, Comprehensive Criteria, Heart Rate, Blood Pressure, ICU

Comparison of Fluoroscopy Time during Right Trans-Radial Coronary Angiography between Amplatz 2 and Judkins Catheters in Patients with Pseudo Lusoria

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Acquired tortuosity of the right subclavian artery may influence the outcome of right trans-radial coronary angiography using conventional catheters. There is not enough evidence available for choosing the best angiographic catheter for patients with some unique tortuosity or angling of subclavian artery.
The aim of this study was to compare the procedure duration of coronary angiography using Amplatz left 2 (AML2) catheter with left judkins catheters in patients with "pseudo lusoria".
This clinical trial was conducted in Qaem Hospital, Mashhad, Iran during 2017-2018. All patients undergoing coronary angiography were screened and 47 patients with a vascular anomaly called as "pseudo lusaria" were identified.
The "pseudo lusoria"was define as "pseudo lusoria"which is defined as a short angle between brachiocephalic artery and subclavian artery during angiography. Patients with "pseudo lusoria"were randomly divided in two equal groups; AML2 and Left Judkins. A checklist including demographic and clinical data was filled for all patients and the duration of fluoroscopy from extraction of 0.0035 wire till engagement of coronary ostium was recorded.
A total of 47 patients (25, 53.2% male and 22, 46.8% female) were diagnosed with "pseudo lusoria". There was no significant difference in demographic characteristics, echo cardiograph and electro cardiograph of patients between groups. The use of AML2 catheter was associated with increased potential to perform the procedure in a shorter time shorter than 120 seconds compared to left Judkins ($P<0.001$).
The use of AML2 catheter might be beneficial in right trans-radial coronary angiography in "pseudo lusoria"cases. Decrease in fluoroscopy time and as a result, decrease of radiation exposure for both clinician and patient. Also, decrease in manipulation of large vessels and as a result, decrease in vascular complications during and after procedure.

Endothelial Nitric Oxide Synthase Genetic Variants and Haplotypes are Significantly Associated with Increased Risk of Premature Coronary Artery Disease

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[1]Molecular Medicine Research Center, Hormozgan University of Medical Sciences, Bandar Abbas, Iran; [2]Hormozgan CardioVascular Research Center, Hormozgan University of Medical Sciences, Iran

Background Endothelium nitric oxide (eNO) deficiency may lead to premature coronary artery disease (pCAD). This defect could be due to the effect of some eNOS gene variants on its gene expression. The aim of this study is to investigate the association between four eNOS gene variants, independently and as four-locus haplotypes, with pCAD in the southern population of Iran .
Methods One hundred fifty pCAD patients and 150 age and sex-matched controls were enrolled in this study. Polymerase chain reaction and PCR restriction fragment length polymorphism methods were used for 4a/4b variable number tandem repeat and "–922A/G, –786T/C, 894G/T" single nucleotide polymorphisms, respectively.
Results The results indicated that genotype frequencies of four studied variants between case and control groups were different significantly ($p<0.05$) except for GG (–922A/G), CC (–786T/C), GT and TT (894G/T) genotypes ($p>0.05$). Likewise, all of the studied four mutant alleles (–922G, –786C, 894T, and 4a) were associated with increased risk of pCAD ($p<0.05$, OR=1.966, OR=3.107, OR=2.21, OR=1.650, respectively). H4 (bGCT) and H7 (aGCG) haplotypes were significantly associated with pCAD which introduced susceptible haplotypes ($p<0.01$, $p<0.0001$, respectively). However, H1 (bATG) as a protective haplotype, was in a significant negative association with pCAD ($P<0.0001$.(
Conclusions This study suggested three novel four-locus haplotypes of eNOS gene variants that could be in association with pCAD in the southern population of Iran.
Keywords: Cardiovascular disease; Endothelium nitric oxide; Haplotype; Polymorphism; Premature Coronary artery disease

CCCCT4

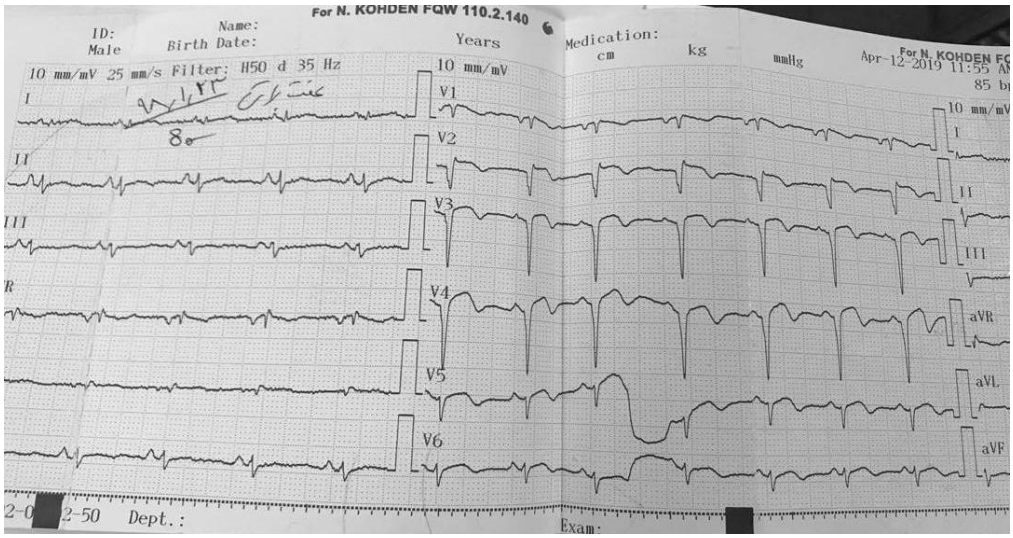
Case Presentation

11th Middle East Cardiovascular Congress (MECC)
& 4th Clinical Cases in Complex Cardiovascular Therapy (CCCCT)

Case Presentation

Dr. Davoodabadi

A 42year-old woman coming with chest pain after flood catastrophy.
She has been involved with diabetes and was not pregnant.
This is her ECG



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Case Presentation

Dr. Farzad Adl

60-year-old man with typical chest pain and positive EST referred for Coronary angiography. His cardiac risk factors were cigarette smoking and hypertension. Coronary angiography was done via right radial artery that showed 3VD with long , complex and significant LAD and D2 stenosis. Provisional PCI on LAD/D2 (bifurcation) was planned. Though my plan was not stenting on D2 branch but due to D2(side branch) dissection I had to change my strategy to TAP technique. After repeated pre-dilatation of D2 with several semi- compliant and noncompliant balloon , stent Orsiro 2.25×35 could not be passed . So I reterive the stent for more aggressive balloon dilatation. A catastrophic event occurred: balloon dislodged while just tip of stent stuck in side branch ostium.

The proximal end of the stent did not exceed the ostium of LAD so I crushed the dislodged stent by one more stent deployed in proximal LAD followed by aggressive high pressure post dilatation.

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More Than Meets the Eye: A 50 Year Old Woman with Acute Onset Chest Pain

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Background. Spontaneous Coronary Artery Dissection (SCAD) is a rare cause of Acute Coronary Syndrome (ACS) with a preponderance for female patients and it is often underdiagnosed. While most of the times it has a benign course with conservative management in some instances the delay to diagnosis can have catastrophic consequences.
Case Summary. A 50 year old woman without previous history of cardiac disease presented with acute onset retrosternal chest pain and a diagnosis of Non ST Segment Elevation ACS was made. Upon admission she underwent coronary angiography. Mild coronary occlusion was noted and anticoagulation and antiplatelet therapy was initiated. Two days later while still in the hospital she developed another episode of chest pain but this time with the elevation of ST segment. An urgent angiogram was performed. Dissection flap was seen in Left Main (LM) coronary artery, Left Anterior Descending (LAD) coronary artery and Left Circumflex (LCX) coronary artery. Stenting of LM and LAD was done.
Discussion. While the reported cases of SCAD in literature are scarce but it is prudent for interventionists to have a high index of suspicion for this diagnosis especially when not all of a patient's clinical and paraclinical features add up.
Keywords. Spontaneous Coronary Artery Dissection. Coronary Angiography. Chest Pain. Stenting of Left Main Coronary Artery. ST Segment Elevation Myocardial Infarction.

Left main coronary artery thrombosis post left cusp PVC ablation

Dr. Mostafa Ahmadi, Dr.Alireza Heidari
Interventional Cardiologist
Mashhad University of Medical Sciencse

A 42 years old woman who admitted to hospital for PVC ablation. There was no risk factor for coronary artery disease. PVC ablation was started via right femoral artery to left coronary cusp approach. PVC ablation was performed successfully.
Before ending of procedure the patient complained from chest pain. ECG changes was detected (avR ST elevation). Selective coronary angiography was done. SCA showed distal left main haziness. After selective Coronary angioplasty patient had cardiovascular collapse.
Re angiography showed LM thrombosis and cut off LM angioplasty was performed and TIMI III was seen after angioplasty. Then patient suffered from acute pulmonary edema. IABP was insert for hemodynamic support. One-day later patient was extubated and in the 2 days later IABP was tapper off. Patient discharged with normal ECG & normal EF.

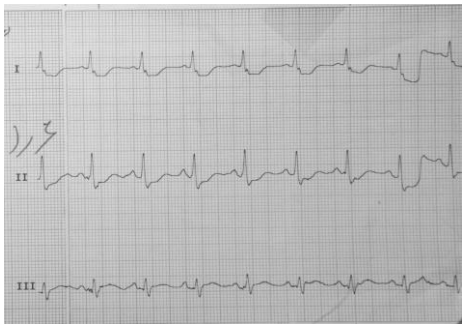
Case Presetaion

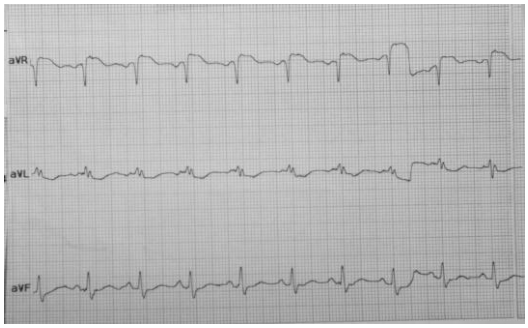
Dr. MJ Alemzadeh-Ansari
Assistant professor
Rajaie Cardiovascular, Medical & Research Center

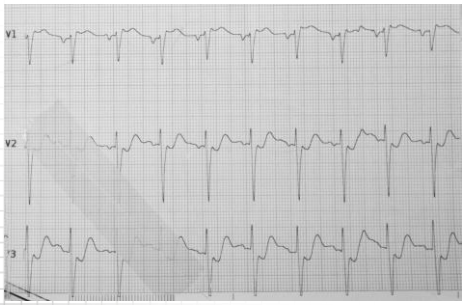
- A 70 years-old-man presented in ED with complain of severe at rest chest pain and pulmonary edema.
- PMH:

1. Hx of CABG 10 years ago and PCI on diagonal via SVG 2 years ago in another center.
2. Hx of COPD, DM, and HTN

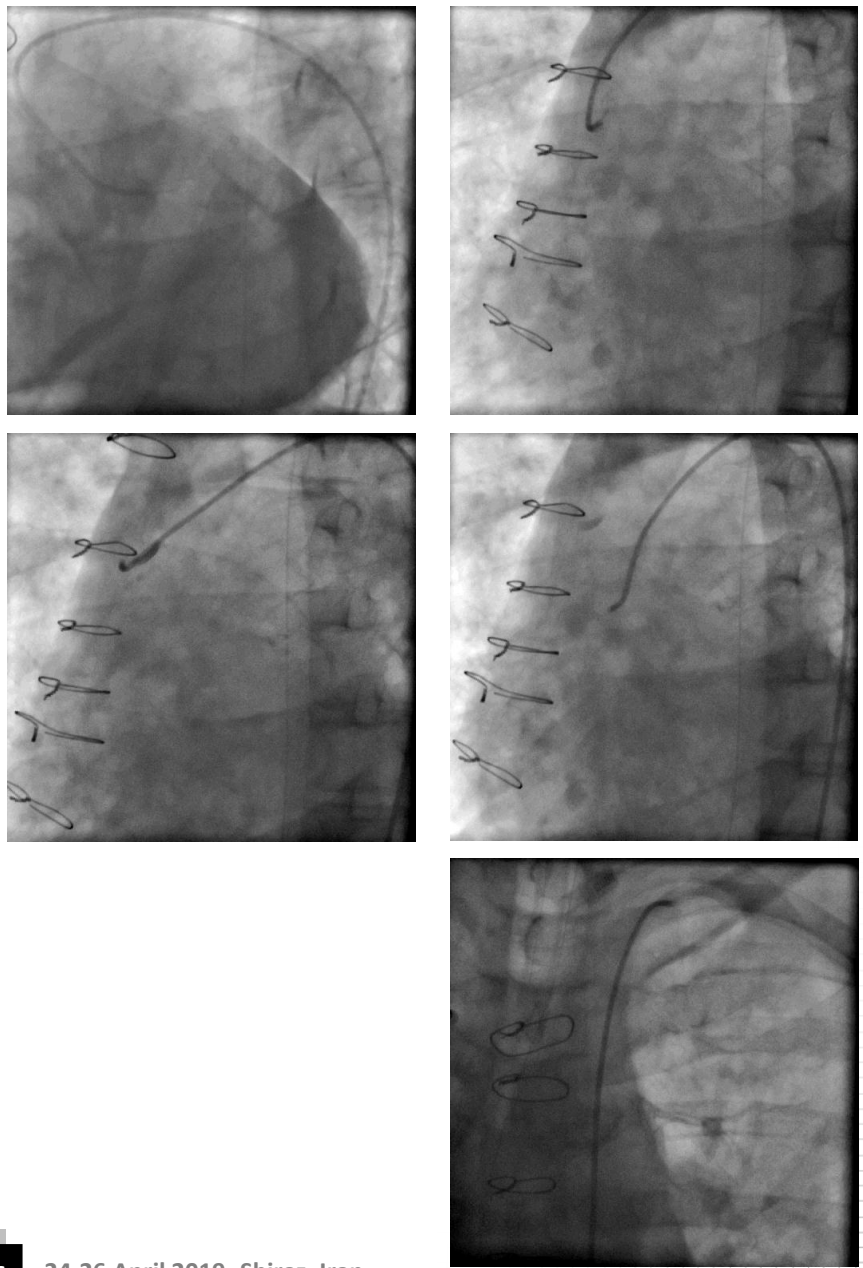
- V/S: BP:95/50, HR: 100, RR: 30, SO2: 84%
- The patient was admitted and underwent treatment for ACS and pulmonary edema.
- Also, the patient was intubated, because reduced oxygen saturation despite receiving oxygen .





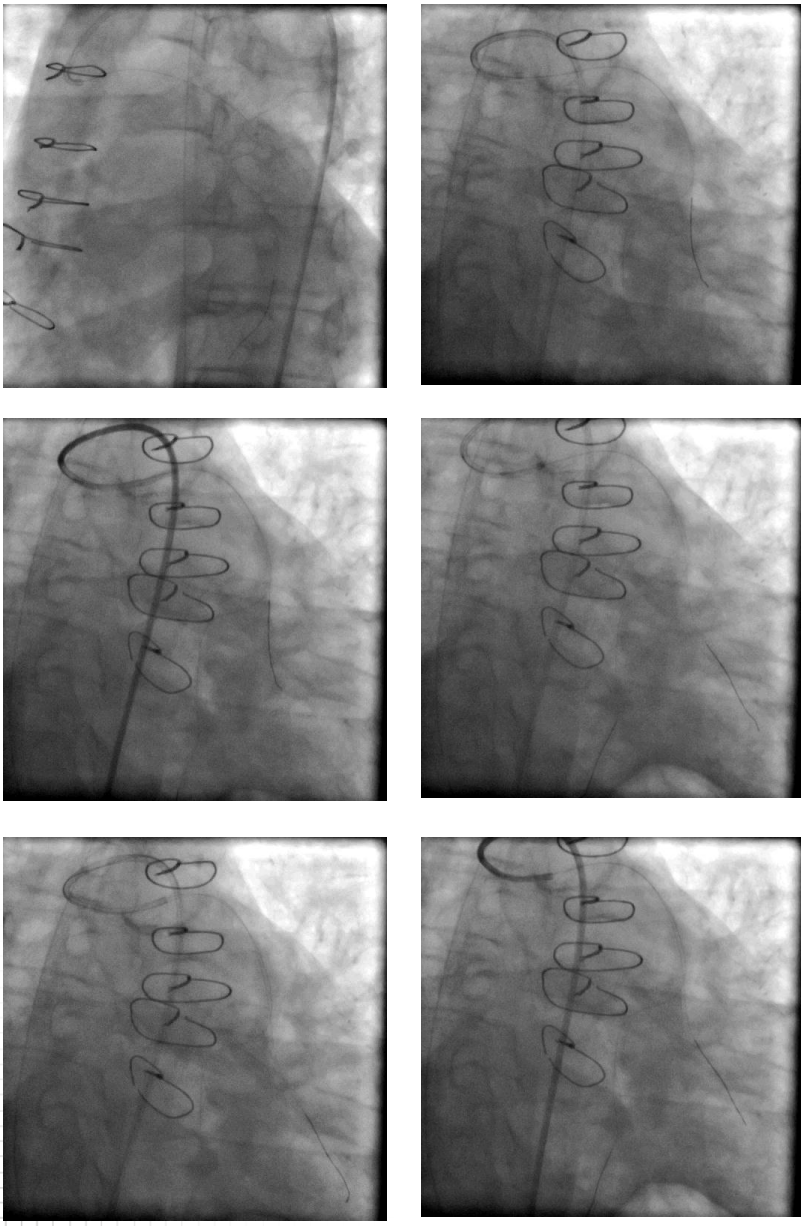


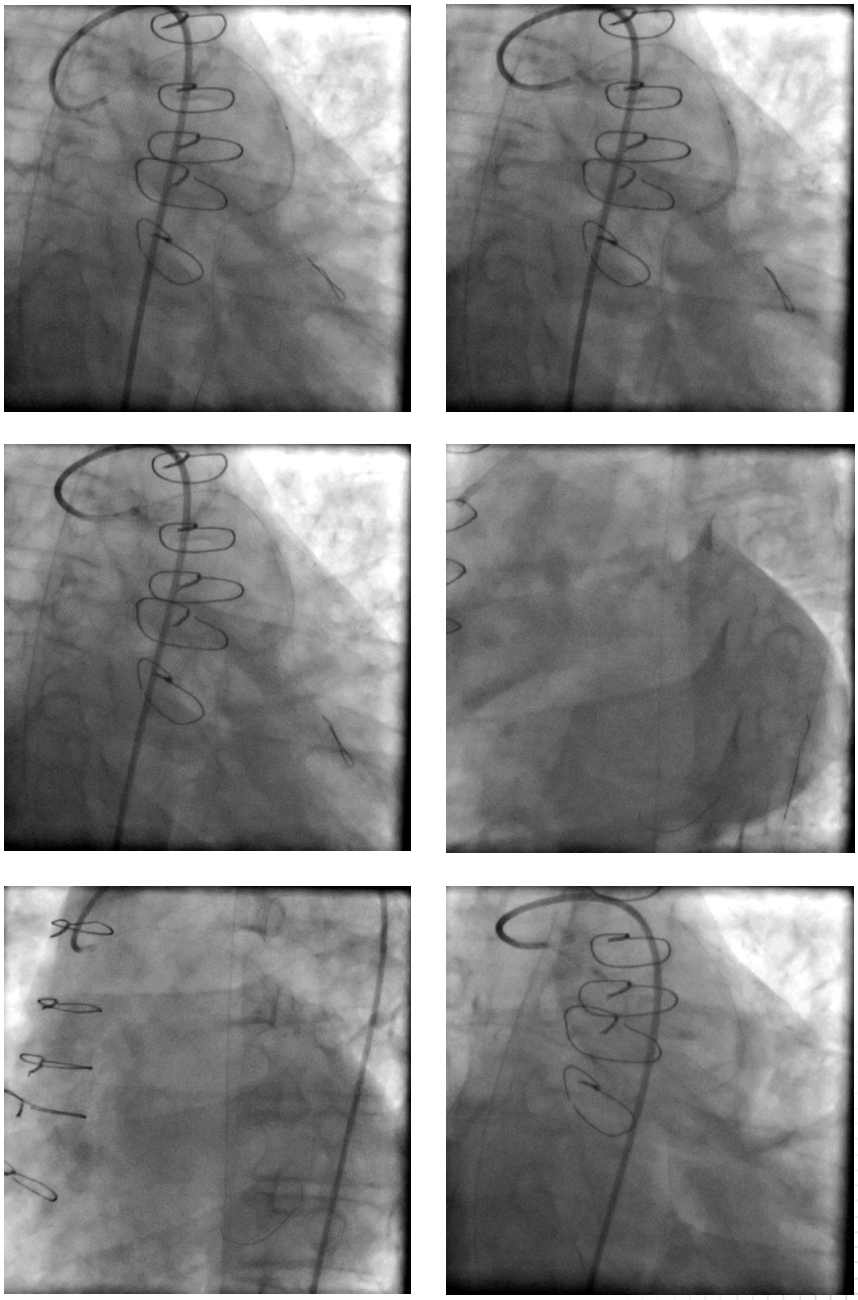
- Echocardiogram showed significant reduction in LVEF (25%); without significant VHD or mechanical complication.
- After loading ASA and Plavix, patient transferred to cath lab for emergency CAG and PCI.

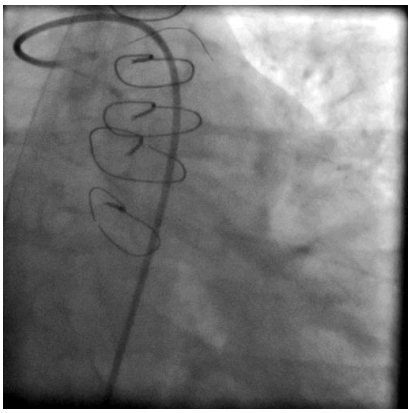


What is the plan?

- He received half dose heparin and also, IIb/IIIa inhibitor after diagnostic CAG.

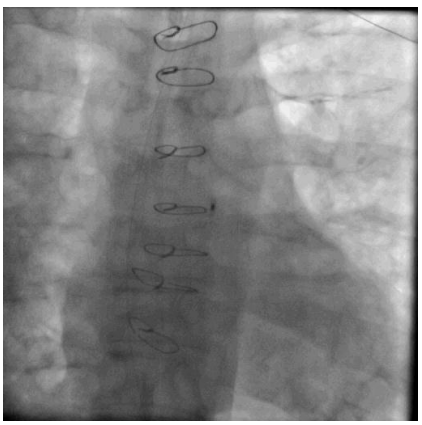






IABP was inserted, IIb/IIIa inhibitor continued, and patient transferred to CCU.

- GI bleeding occurred, which was stopped after IIb/IIIa inhibitor discontinued.
- Hemodynamic was stable, and IABP removed 24 hour later.

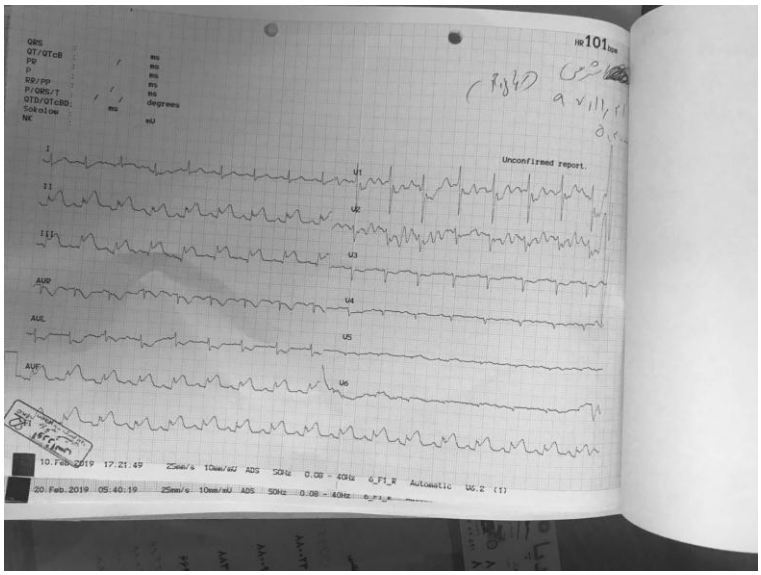


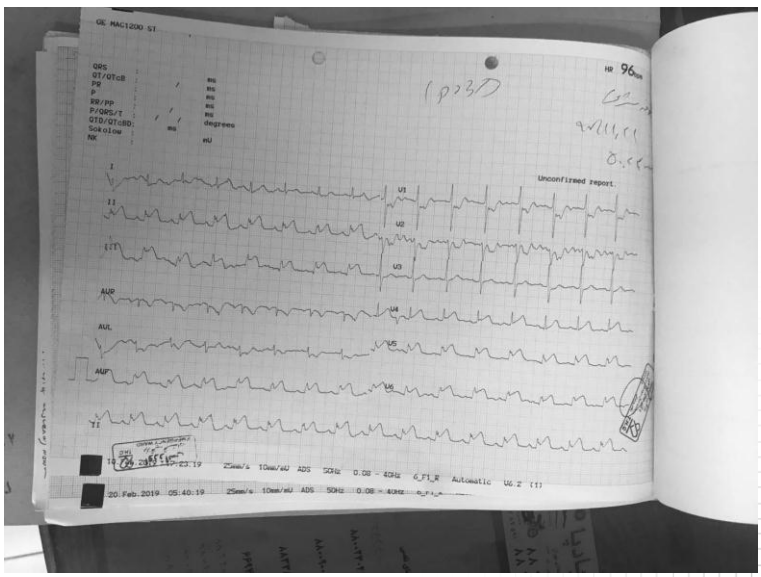
- Unfortunately, despite stable hemodynamic status, extubation was not possible (because advanced COPD).
- After 2 week patient died because respiratory failure and infection secondary to long intubation.

FEMAIL,53Y,INF&POS STEMI

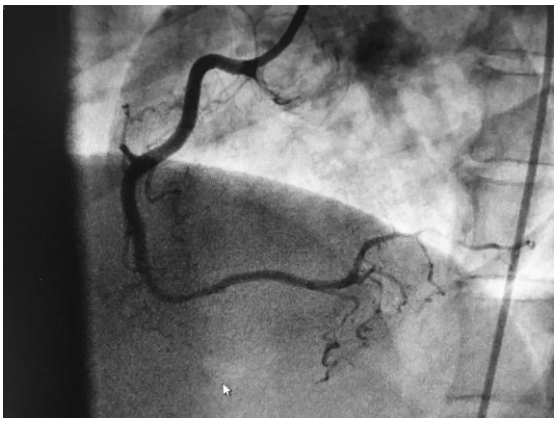
NO RISK FACTOR
ATYPICAL CHEST PAIN FROM 3DAYS AGO
TYPICAL CHEST PAIN FROM 2 HOURS BEFOR ARRIVE TO HOSPITAL

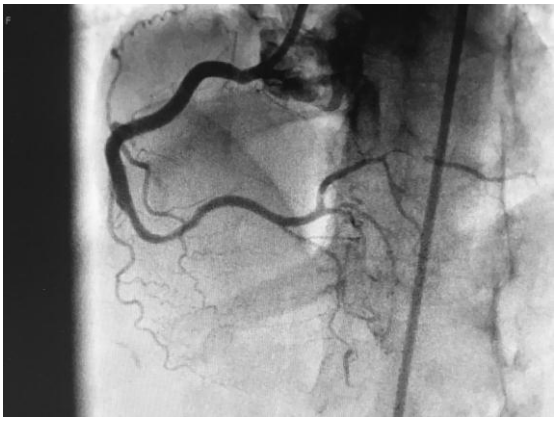
Dr. Alidoust





CAG





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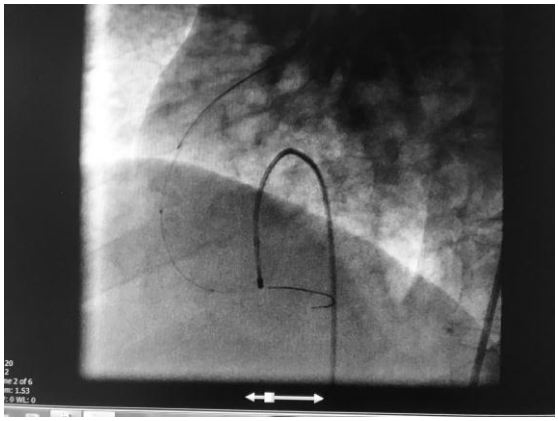
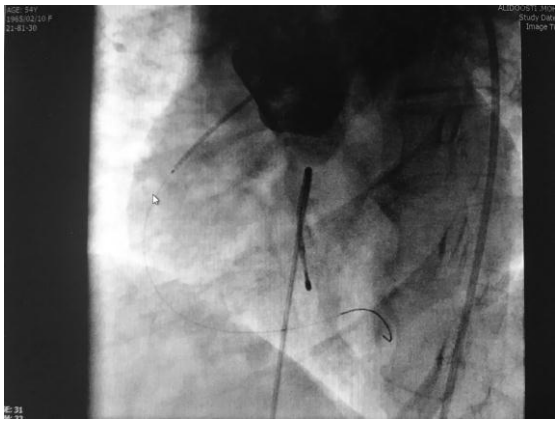


UNSUCCESSFUL STENTING



Percutaneous Pulmonary Valvotomy in Pulmonary Atresia with Intact Ventricular Septum; indications and techniques.

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Pulmonary atresia with intact ventricular septum (PA-IVS) is a relatively uncommon form of congenital heart disease and is characterized by varying degrees of right ventricle (RV) hypoplasia and associated with tricuspid valve dysplasia and sinusoidal right ventriculo-coronary connections.
Right ventricle decompression may be achieved by simple surgical pulmonary valvotomy or by a more radical transannular patch of the right ventricular outflow tract (RVOT) in the neonatal period with or without a concomitant systemic-pulmonary shunt. More recently, the use of CTO coronary wires and balloon dilation has made possible primary treatment of this group of patients to be undertaken in the catheterization laboratory.
Although this technique is a possible treatment in experienced hands but the size and morphology of RV and Tricuspid annulus are the great considerations. In this article we discuss about the indications and techniques.

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Persistent Coronary Extravasation Despite two Covered Stents Deployment

Ehsan Bahramali MD
Shiraz Kowsar Hospital

The patient was a 64-year-old man who had presented to emergency department and was admitted with impression of non-ST segment myocardial infarction. He was hemodynamically stable and an exercise stress test was negative for ischemia some 40 days prior to admission. Risk factors included cigarette smoking and a positive family history. He was transferred to catheterization laboratory as per early invasive strategy and angiogram revealed three vessel disease in coronary arteries with sub-total occlusion in left anterior descending (LAD) artery. All the vessels were amenable to percutaneous coronary intervention (PCI), so the patient were to select between coronary artery bypass surgery (CABGs) versus PCI and the latter was his choice. After pre-dilation of LAD lesion, a 3*40 mm drug eluting stent was deployed at 12 atmospheres with its distal edge just covering the mid-LAD muscle bridge. Post dilation with a non-compliant balloon size 3*15 mm at 8 atmospheres resulted in spiral perforation of LAD with contrast entering pericardial space freely. Balloon

tamponade in mid part LAD immediately ensued and following ping-pong technique, another 0.014-inch wire over which a covered stent was passed was parked in a second guiding catheter. With immediate withdrawal of the now deflated balloon, second wire passed the lesion and a covered stent 3.5*18 mm was deployed. Angiograms apparently showed no further leakage however the patient developed hypotension in 30 minutes and cardiac tamponade occurred. A pigtail catheter was inserted and tamponade resolved and repeated angiograms showed persistent dye staining secondary to which another 3*13 mm covered stent was deployed more distally. Delayed angiograms failed to reveal further leak however 150-200 cc/hour fluid was drained from the pigtail catheter and auto transfused to the patient for the next 3 hours. The patient was therefore transferred to operating room and a pericardial patch was used to stop the leakage following which CABG was done using three saphenous vein grafts to LAD, diagonal, obtuse marginal and posterior descending arteries. The patient had an uncomplicated post-op course and was discharged in 5 days.

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Pulmonary Valvotomy Results using CTO Coronary Wires, a midterm follow up

Hassan Birjandi MD,
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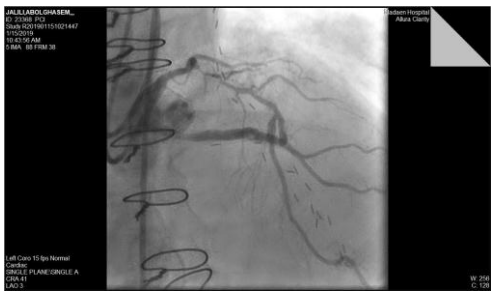
Congenital and Pediatric Cardiology Division, Pediatric Dep. , Faculty of Medicine,
Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad- Iran

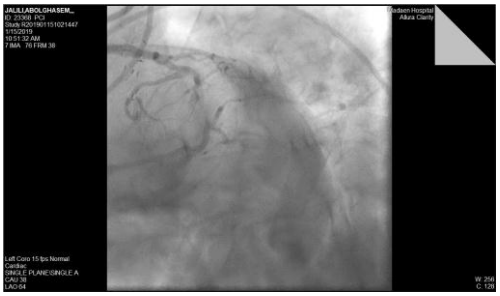
Pulmonary atresia with intact ventricular septum is a rare congenital heart disease with varying degrees of tricuspid valve and right ventricular size and morphology.
The use of CTO coronary wires for valvotomy is a new technique instead of surgical valvotomy or radiofrequency catheter perforation.
In this article we review the midterm results of pulmonary valvotomy cases

Hyperacute stent thrombosis due to early stent recoil

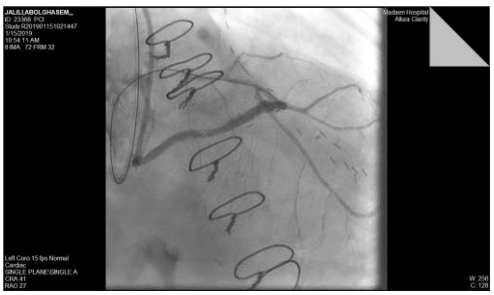
Mohammd R. Bayanati, MD

LAD calcified ostioproximal CTO lesion in a post CABGs patient with occluded LIMA. Diatal LAD is filled via degenerative stenotic SVG on D.

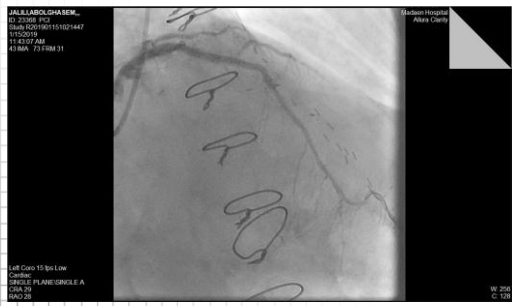


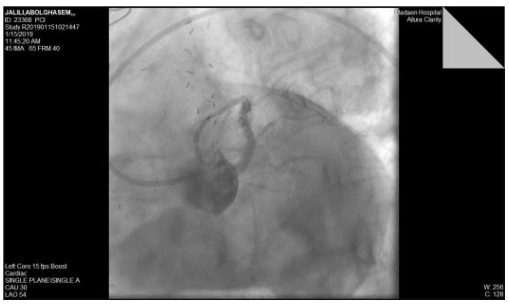


Lesion wiring
Crossing the lesion using antegrade approach via Conquest Pro 12

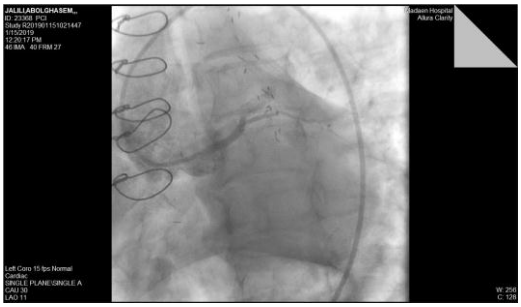


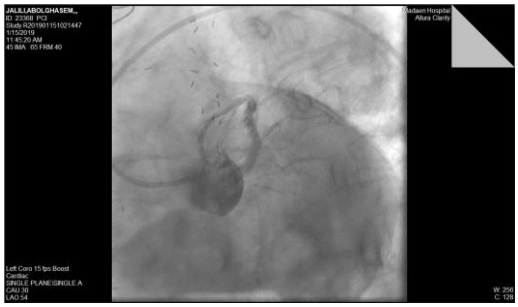
After predilation, stenting using 2 Biomatrix stents and hi-pressure post dilation



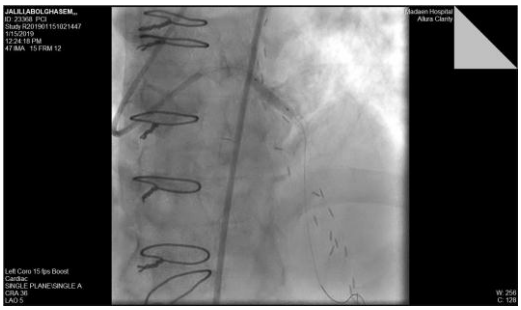


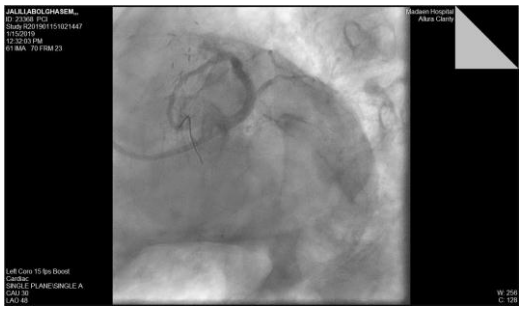
Hyperacute stent thrombosis and stent recoil at LAD ostioproximal





Rewiring and hi pressure post dilation





Final Result

Conclusion

Early stent recoil especially in heavily calcified lesions can lead to acute stent thrombosis in short term and restenosis in long term.

Hi pressure post dilation could either prevent and treat early stent recoil and following consequences.

Stent structure, material and design could have a role in stent recoil via radial force and shape memory.

RCA dissection & another rare event

Dr.Farzad Emami
Hamedan medical educational university

70 year old woman was reffered to me for RCa A PCI.
She was a 70 year old woman with hx of chest pain &exertional dyspnea &normal LVEF,whose RCA had significant stenosis.
At the first stage,guiding catheter induced dissection developed,which was fixed by steting.During the insertion of the second stent,the separation of the stent from its balloon was noticed & then wire prolaocing complucated the procedure &finally we noticed a factory fault that caused this situation.

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Primary Percutaneous Coronary Intervention and Stent Thrombosis

Hossein Farshidi MD - HUMS

Stent thrombosis (ST) is one of the most treaten condition we could see in course of ST Elevated Myocardial Infarction (AMI) management (1). Stent thrombosis can be seen in Bare metal stent or Drug eluting stents. There is no difference between BMS or DES In acute phase stent thrombosis but late ST has high correlation with old generation DES.(2) Acute ST incidence reported to be between 0.5- 2%. There are lot of causes been reported to have connection with ST. Early phase ST has more mortality than late ST. In a registry it been shown that early ST reported in 3.5% of those patients presented with AMI. Actually several factors been reported for these condition (3). Some are related to patients clinical presentation, some are due to lesion characteristics and others are related to operator experiences. Rate of ST is higher in cases with STEMI and large thrombus burden.(4)In a study reported to be more than 2.5 fold. Patient related factors can counted as smoking, insulin treated diabetes, chronic kidney disease, acute coronary syndrome, thrombocytosis, high post treatment platelet reactivity, early dual antiplatelet therapy discontinuation, and surgical procedures. Lesion related factors are diffuse atherosclerotic plaques, small diameter vessels, bifurcation lesions, large thrombus burden. Procedure related factors like dissections, malapposition, multiple stents, long size stents, overlapped stents, not good stent expantion, stent fracture, slow flow and sever left ventricle systolic dysfunction.. An Italian multicenter registry treating 110 patients with ST reported that optimal reperfusion could not be achieved in near two-thirds of patients resulting in a high rate of major adverse cardiac and cerebrovascular events and a mortality rate of 12% at 30 days. The HORIZONS AMI trial showed that one-third of all ST events during the three-year follow – up occurred during the hospital stay and that

patients with in-hospital compared to out of hospital ST had significantly greater one year mortality. Independent predictors associated with the occurrence of early ST. Early treatment with heparin were associated with a reduced early ST.(5)

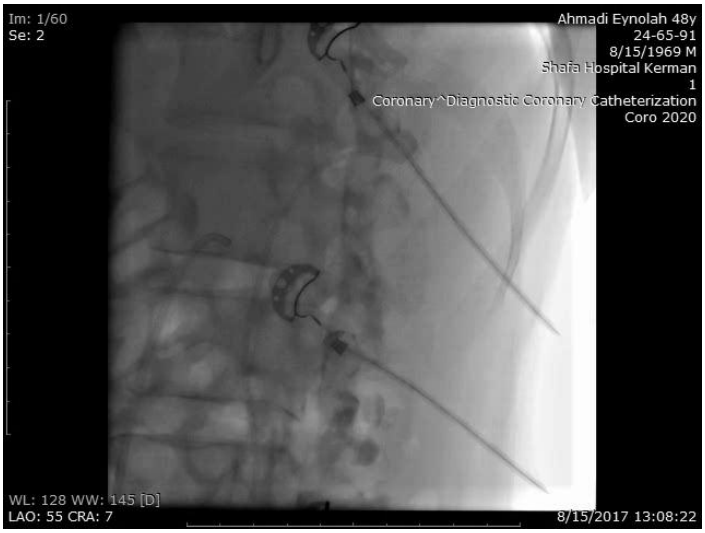
References:
1-Cutlip DE, Baim DS, Ho KK, et al., Stent thrombosis in the modern era: a pooled analysis of multicenter coronary stent clinical trials, *Circulation*, 2001;103(15):1967–71.
2-Ong AT, Hove A, Aoki J, et al., Thirty-day incidence and six-month clinical outcome of thrombotic stent occlusion after bare-metal, sirolimus, or paclitaxel stent implantation,
J Am Coll Cardiol, 2005;45(6):947–53.
3-Beinart R, Abu Sham'a R, Segev A, et al., The incidence and clinical predictors of early stent thrombosis in patients with acute coronary syndrome, *Am Heart J*, 2010;159(1):118–24.
4-Dangas GD, Caixeta A, Mehran R, et al., Frequency and predictors of stent thrombosis after percutaneous coronary intervention in acute myocardial infarction, *Circulation*,
2011;123(16):1745–56.
5-Dangas GD, Caixeta A, Mehran R, et al., Frequency and predictors of stent thrombosis after percutaneous coronary intervention in acute myocardial infarction, *Circulation*,2011;123(16):1745–56.

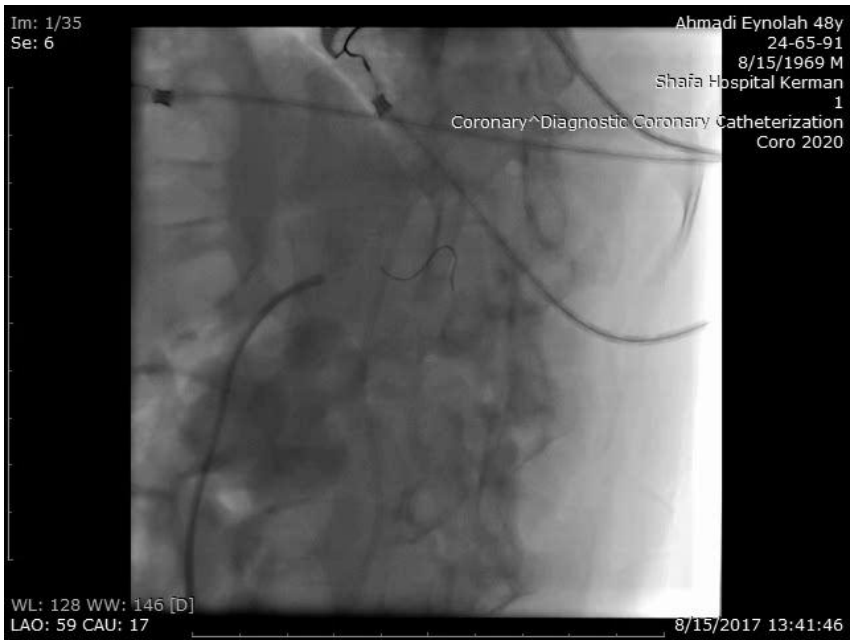
Post PCNL Gross Hematuria

Dr yadollah fathi

A 45y old male with sever gross hematuria and anemia

- He received 6unit pack cell and admitted for renal angiography
- His HB was 8.2
- Vital sign BP 100/70mmhg and HR 11o/min

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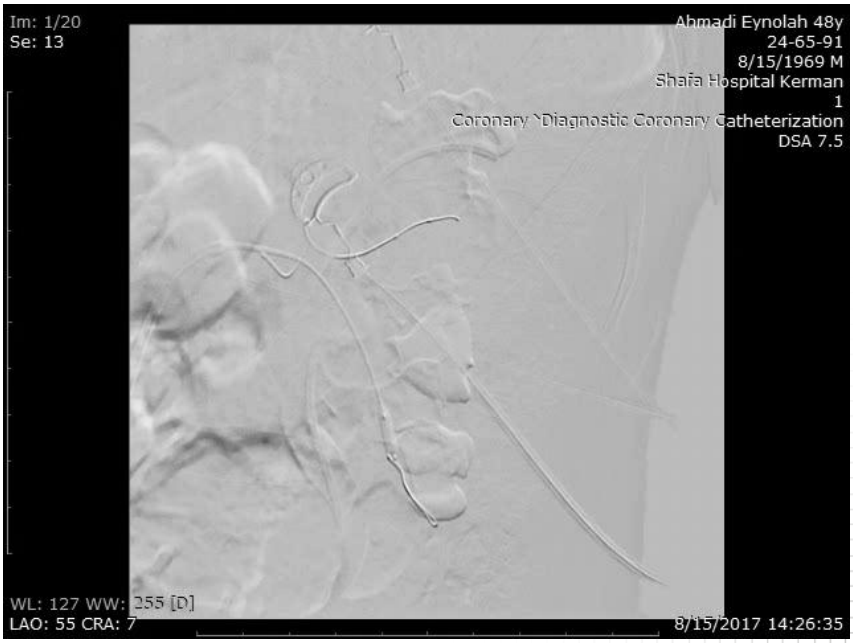
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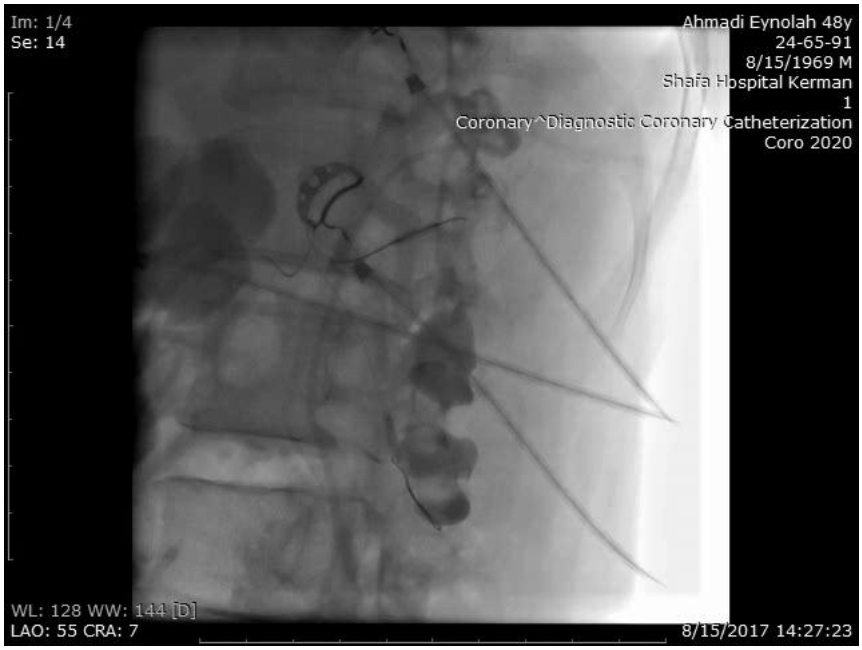
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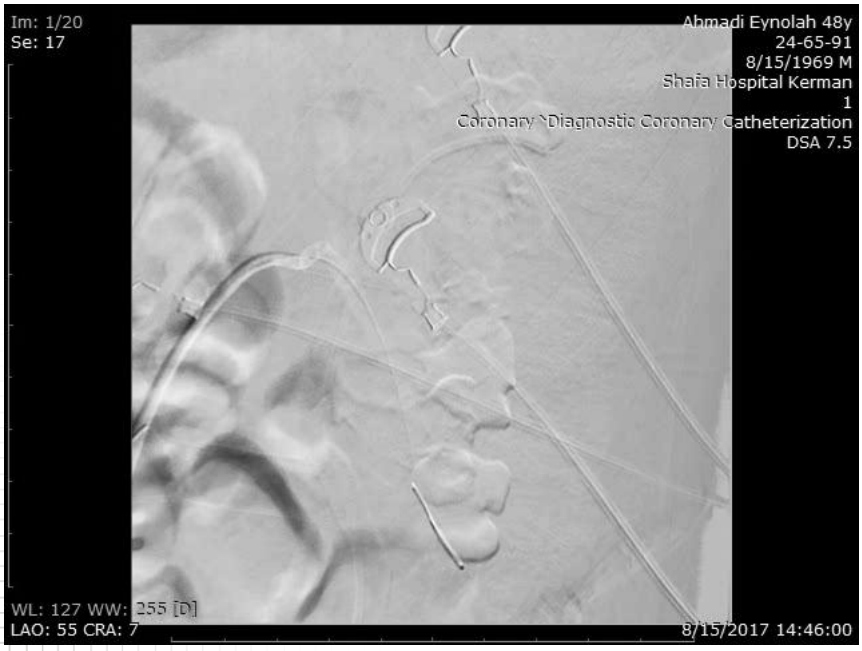
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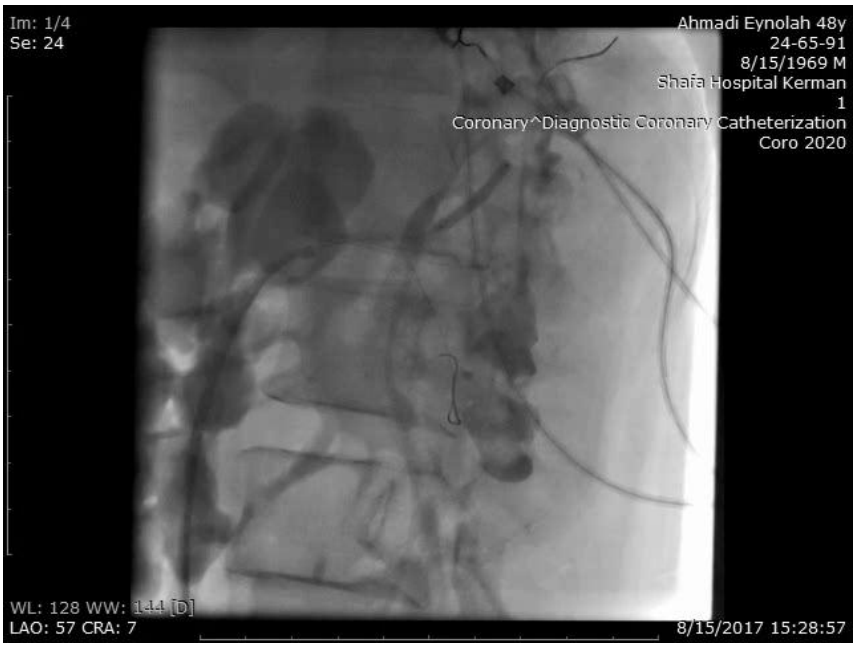
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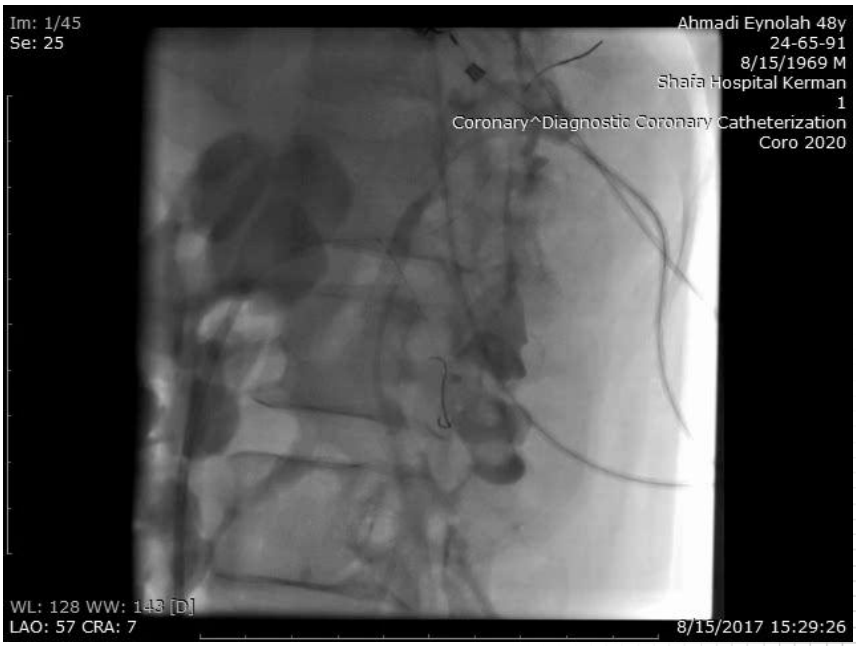
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LAO: 57 CRA: 7
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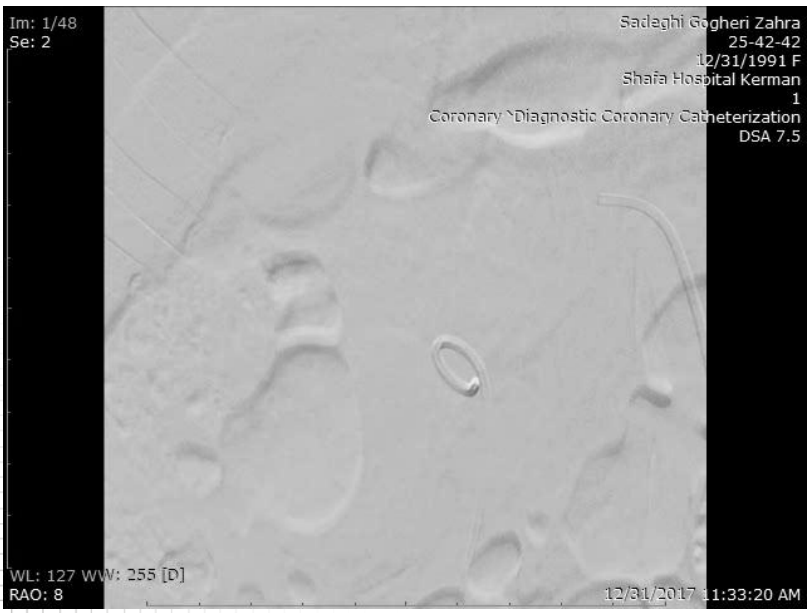
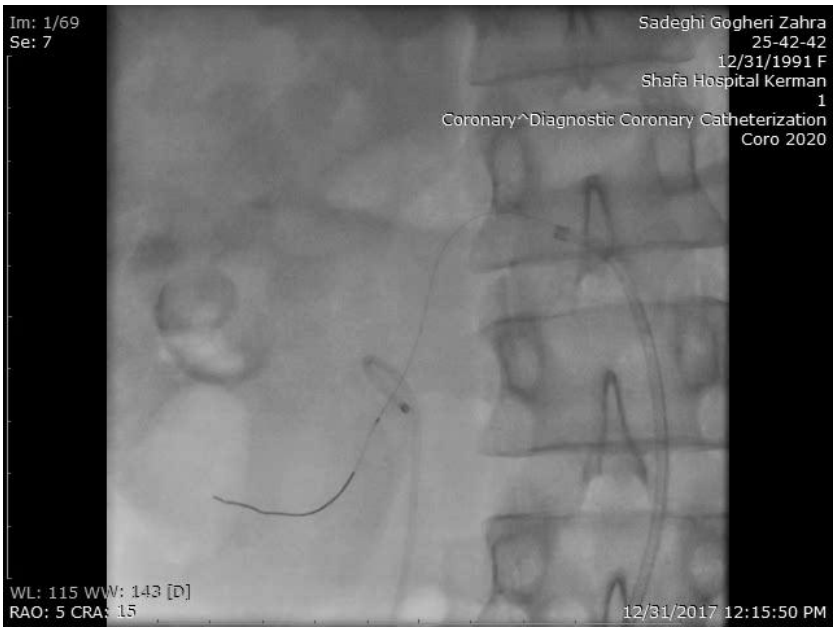
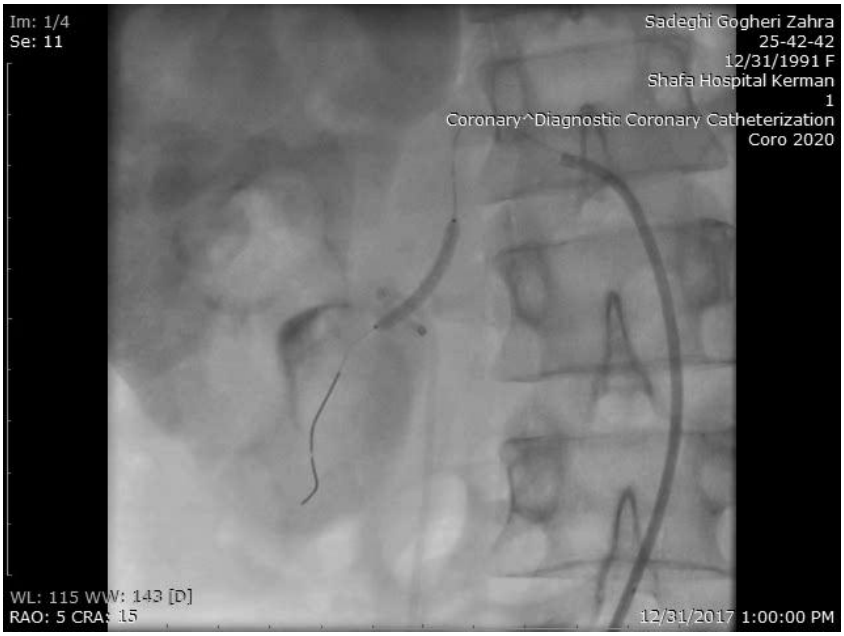
A 28 year old lady with gross hematuria after PCNL

- Admited 2w later for renal angiography
- She received 4unit p.cell
- HB =8.5 on admission



Case Presentation

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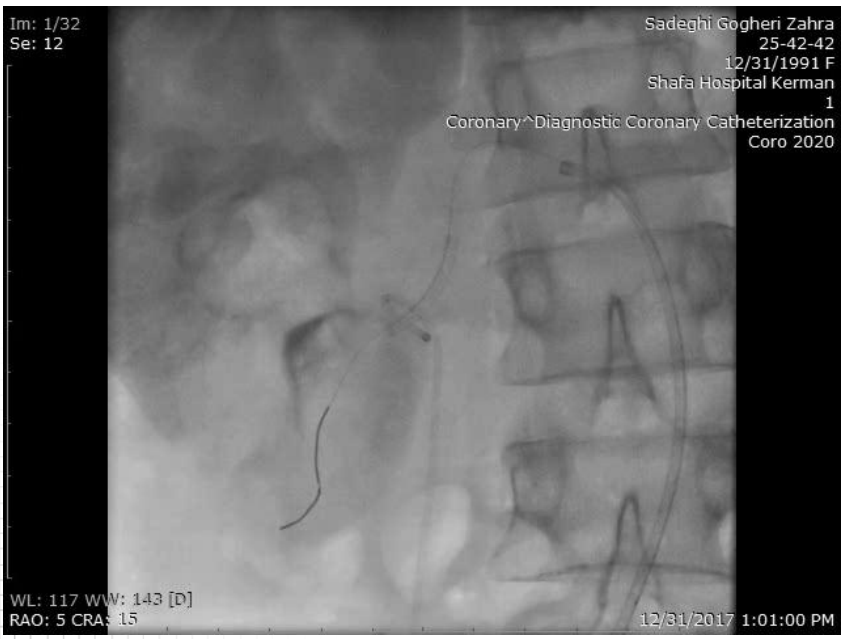
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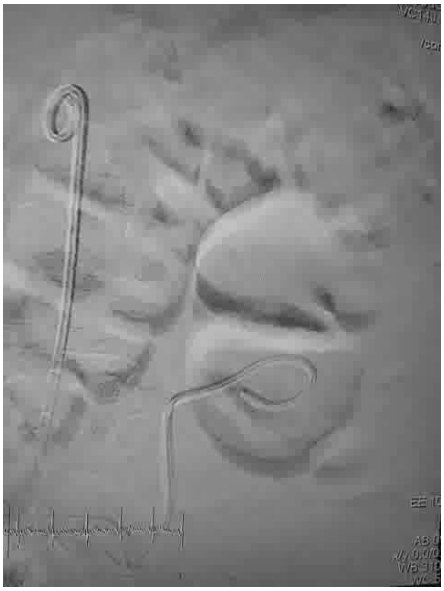
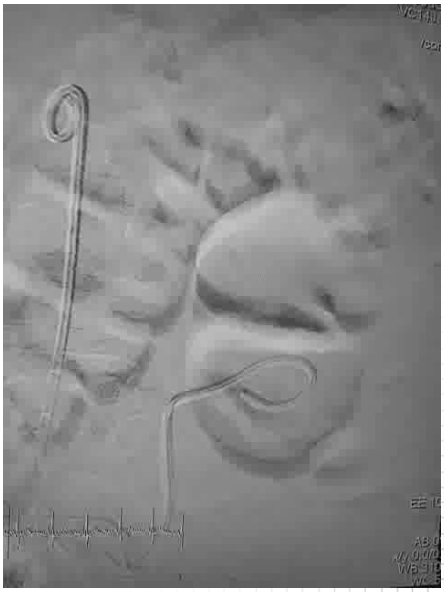
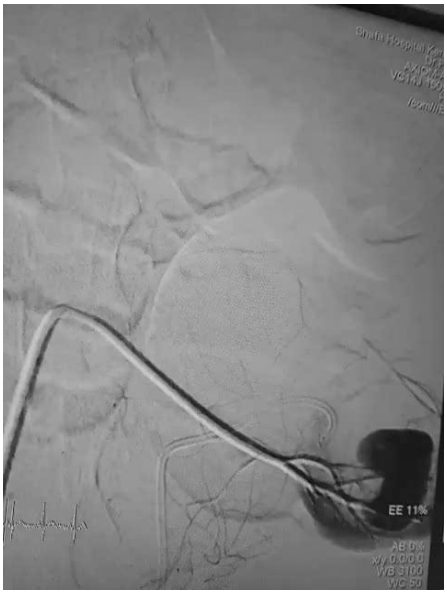
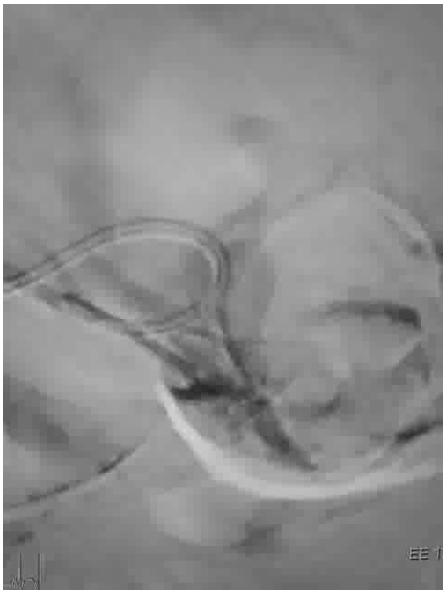
A 26 y 0ld male with gross hematuria

- Refereed 1w after PCNL







The Inferior Vena Cava Stenting : A Case Report

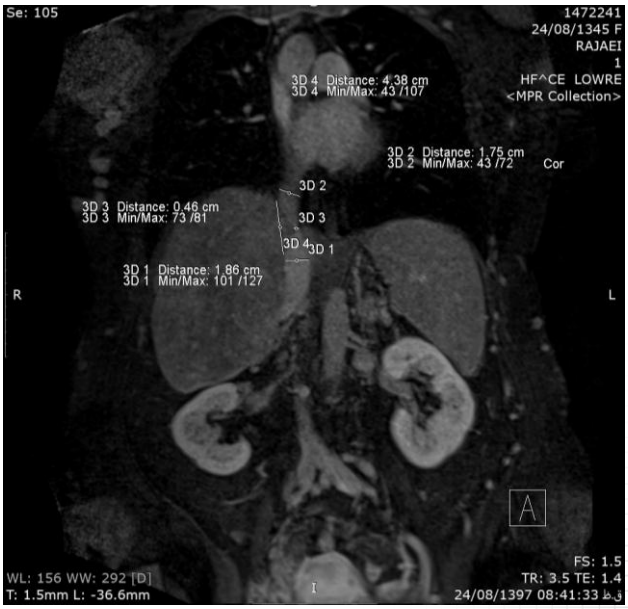
Ata firouzi
Rajaie Cardiovascular, Medical, and Research Center

History

- This study reports a 52 years old woman with a history of leg pain, foot edema, and fatigue.
- In physical examination, she had Lower limb varices and pitting edema.
- Past history was positive for hypertension, hypothyroidism, and HBV.
- Budd-Chiari syndrome (BCS) occurs as a result of multiple causes. In Asian populations, the most common cause of BCS is associated with membranous obstruction or occlusion of inferior vena cava (IVC)
- One of the causes of Budd-Chiari syndrome (BCS) is obstruction of the inferior vena cava.

Imaging

- Ultrasonography showed thrombosis in a supra hepatic portion of IVC.
- Echocardiography showed mild LV enlargement and mild MR and TR.
- In MR venography with Gadolinium filling defect and severe stricture of supra hepatic portion of IVC was depicted.
- In angiography, IVC injection showed tight stenosis of supra hepatic portion of IVC.



The wire pass from IVC to PA and then balloon angioplasty and stenting were performed with BIB balloon 22/50 mm and CP stent 45 mm successfully.

- Three months later follow up showed improve clinical symptoms and patent IVC stent in Doppler sonography.
- Percutaneous stent angioplasty can be considered the first-line management for BCS patients with obstruction of IVC because of its minimal-invasive method.

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Bifurcation Stenting with Large Size Mismatch; What Are The Solutions?

Arash Gholoobi, M.D
Department of Cardiovascular Diseases, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.

A 75 year-old woman presented to emergency department with a prolonged episode of epigastric pain from 1 hour before. Right coronary artery had a critical stenosis just before crux with large size mismatch (5 mm at proximal and around 3 mm distally). There are some limitations for the treatment of these types of lesions using current DES platforms including:

1- Although in an ideal scenario, the stents should be able to achieve a minimal lumen diameter equal to the diameter of the proximal optimizing balloon; this is often not the case.
2- Approaching physical limit of the stent induces changes in mechanical stiffness and drug delivery, therefore the performance of the device can be completely altered.
3- Overexpansion increases stent stiffness due to the straightening of the crown close to the stent physical limit. This may increase risk of strut fracture due to metal fatigue on the stent.
So we treated this bifurcation lesion using a self-apposing stent (Stentys) which maintains its cell geometry and scaffolding despite proximal and distal diameter mismatch.
This unique stent platform could be a great option for the treatment of such lesions.

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Percutaneous Device Closure of a Ruptured Aortic Sinus of Valsalva Aneurysm in a Patient With a Mechanical Bileaflet Aortic Valve

Alimohammad Hajizeinal, Ali Hosseinsabet*
Tehran heart center, Tehran university of medical sciences, Tehran, Iran

A 35-year-old man was referred to our echocardiography laboratory for a routine evaluation of his mechanical aortic valve. He had a history of surgical ventricular septal defect closure 27 years previously and aortic valve replacement with a mechanical bileaflet prosthesis (CarboMedics no#25) due to aortic valve regurgitation 16 years previously.
Transthoracic and transesophageal echocardiography revealed mild systolic left ventricular dysfunction (ejection fraction=45%), right ventricular enlargement and dysfunction, mild tricuspid regurgitation with an estimated systolic pulmonary artery pressure of 30 mm Hg, a normally functioning aortic valve prosthesis without any paravalvular leakage and a continuous turbulent flow from the noncoronary sinus of the aorta into the right atrium, suggestive of a ruptured aortic sinus of Valsalva aneurysm into the right atrium, which we considered a new finding since it had not been reported in previous echocardiographies. Computed tomography angiography of the ascending aorta was suggestive the feasibility of the device closure. Aortography demonstrated this pathology. The largest diameter in these imaging modalities was about 3 mm both on the aortic side and at the ruptured site. We considered congenital cause as the most common etiology of this pathology.
The ruptured sinus of Valsalva was closed with an Occlutech patent ductus arteriosus device occluder (size=6/4mm) (Occlutech GmbH, Germany), and successful closure was confirmed by aortography and transesophageal echocardiography. Follow-up transthoracic echocardiography after 1 month confirmed the appropriate site of the occluder device and the absence of complications.

Re-Intervention for Occluded Iliac Vein Stent

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Interventional cardiologist
Interventional phlebologist
Shiraz vein center
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A small fraction of stented limbs require reintervention to correct stent malfunction. This presenation describes the reasons for reintervention, types of procedures performed, and outcome.

The chief risk factors associated with stent occlusion were the presence and severity of thrombotic disease. Thrombophilia by itself was not a risk factor.

The median time to re-intervention after initial stent placement is 15 months .Late stent occlusion occurred in 3% of limbs at a median of 13 months. Acute re-thrombosis was the most common presentation and those patients were treated with thrombolysis. The thrombolysis was successful in only 31% of limbs with the remainder left occluded.

Stent occlusion appears to be caused by a recurrent thrombotic event rather than slowly evolving narrowing of the stent. Long lesions requiring multiple stents, and extension of the stent into the common femoral vein were associated with stent occlusion. Patients identified with occlusion at routine follow-up were successfully treated with anticoagulation.

Overall, re-intervention in the setting of stent occlusion or non-occlusive malfunction significantly improved presenting symptoms and provided durable relief.

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Dr. Kianoosh Hosseini
Tehran university of medical sciences

Bifurcation lesions are a challenging lesion subset in percutaneous coronary intervention (PCI) and up to 23 % of elective PCI cases are reported to be bifurcation lesion . Primary PCI has been proved as the best treatment option in ST segment elevation myocardial infarction (STEMI) ; specially if performed within early hours after symptom onset. Bifurcation culprit lesions have a reported prevalence of about 10 % among patients presenting with STEMI. The outcome of such lesions have been evaluated in recent studies. Based on a large body of evidence in the literature , similar outcome has been reported in bifurcation and non bifurcation lesions as culprit for STEMI .However, the preferred treatment strategy for bifurcated culprit lesions in patients undergoing primary PCI is still a matter of debate and controversy. The main discussion is to choose between one stent and two stent strategies. Some experts believe that restoring the flow within the occluded artery in the most important principle in primary PCI ; and simple strategy like one stent method is the preferred approach to reduce procedure time. Most of the participants enrolled in

previous studies comparing these two methods , underwent one stent strategy and there are a few head to head randomized clinical trials with two arms of one stent versus two stent strategy. About 13 % of participants in DKCRUSH II study were STEMI patients and the results of double kissing crush method was comparable with one stent provisional method. It was the only randomized clinical trial including STEMI patients with bifurcation lesions. COBIS II registry was a real world study that included about 3000 patients with bifurcation lesions , 367 of whom were STEMI patients. 304 of these patients received one stent and 63 of them received two stents for their bifurcated culprit lesions. The rate of MACE was significantly higher among double stent method arm. Stent thrombosis and target lesion revascularization was significantly higher in two stent arm. It is interesting that the proportion of two stent method have been decreased over time after publishing articles in late 2000's which were in favor of provisional one stent method. Independent predictors of MACE in COBIS II study were two stent method, older age , high SYNTAX score and true bifurcation lesions.

Despite presence of these data, the patients should be treated individually. Here we present two cases of STEMI with bifurcated culprit lesions. We chose provisional one stent strategy for both , in one case however we had to put the second stent because of side branch compromise after main vessel stenting and balloon angioplasty of the side branch.

1 -Salinas P, Mejı´a-Renterı´a H, Herrera-Nogueira R, et al. Bifurcation Culprit Lesions in ST-segment Elevation Myocardial Infarction: Procedural Success and 5-year Outcome Compared With Nonbifurcation Lesions. **Rev Esp Cardiol.** 2018;71: 801–810.

2 - Frangos C, Noble S, Piazza N, et al. Impact of bifurcation lesions on angiographic characteristics and procedural success in primary percutaneous coronary intervention for ST-segment elevation myocardial infarction. **Arch Cardiovasc Dis.** 2011;104:234–241.

3 -Dudek D, Mehran R, Dziewierz A, et al. Impact of bifurcation target lesion on angiographic, electrocardiographic, and clinical outcomes of patients undergoing primary percutaneous coronary intervention (from the Harmonizing Outcomes With Revascularization and Stents in Acute Myocardial Infarction [HORIZONSAMI] trial). **EuroIntervention.** 2013;9:817–823.

4 . Kanei Y, Nakra NC, Liou M, Singh J, Fox JT, Kwan TW. The importance of bifurcation lesions in patients undergoing percutaneous coronary interventions in ST-segment elevation myocardial infarction. **Cardiovasc Revasc Med.** 2013; 14:81–83.

5 . Abdel-Hakim DE, Garot P, Champagne S, et al. Impact of bifurcation lesions on clinical outcome and prognosis of primary angioplasty in acute myocardial infarction. **EuroIntervention.** 2008;4:93–98

6 - Chen SL, Santoso T, Zhang JJ, et al. A randomized clinical study comparing double kissing crush with provisional stenting for treatment of coronary bifurcation lesions: results from the DKCRUSH-II (Double Kissing Crush versus Provisional Stenting Technique for Treatment of Coronary Bifurcation Lesions) trial. J Am Coll Cardiol. 2011;57:914–920.

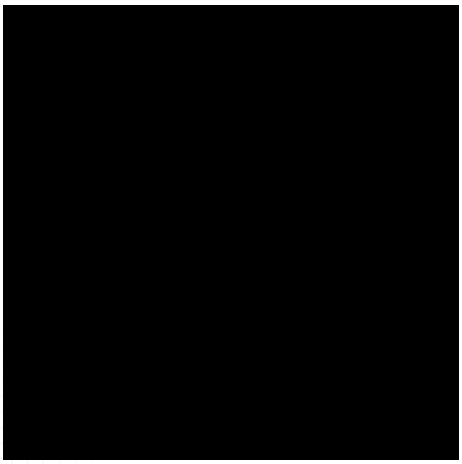
7 - Ki Hong Choi,a Young Bin Song,a,* Jin-Ok Jeong, et al. Treatment Strategy for STEMI With Bifurcation Culprit Lesion Undergoing Primary PCI: The COBIS II Registry . Rev Esp Cardiol. 2018;71(10):811–819

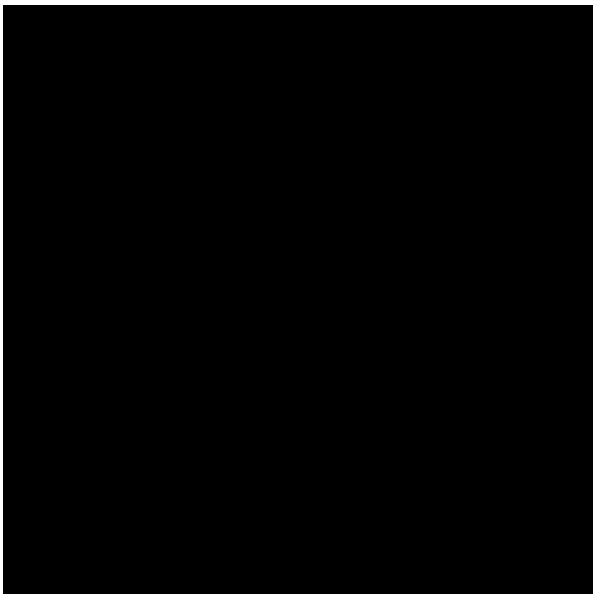
Lost Sidebranch During Retro Lcx Intervention

- A 46 Year Old Diabetic Lady
- Accelerated cp During Last Months
- Angio Showed Discrete Mid Portion Lad Lesion with Flush Mid Portion Cto Lesion in Large Dominant lcx
- Nondominant Rca Showed Patent Stent

2016

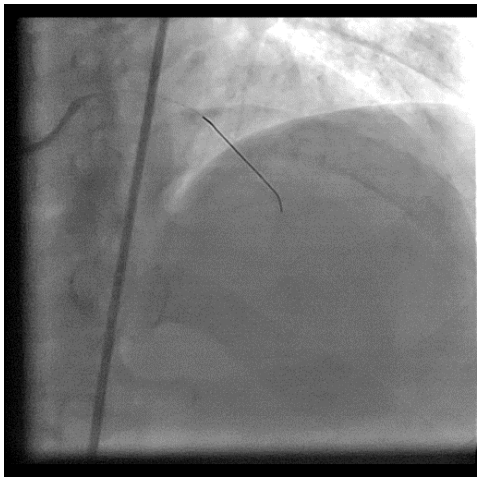
- Failed Attempt to Open Lcx Lesion
- Primarily due to the fact that we could not localize proximal cap



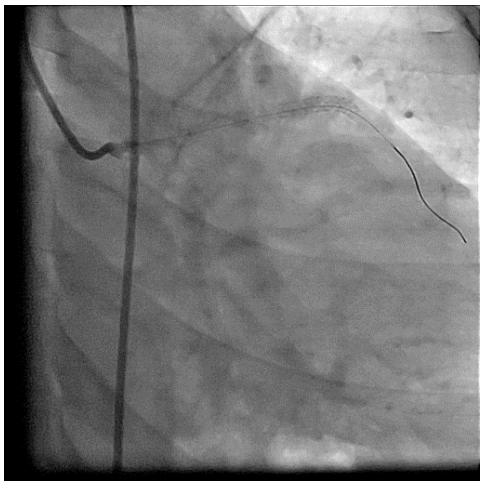


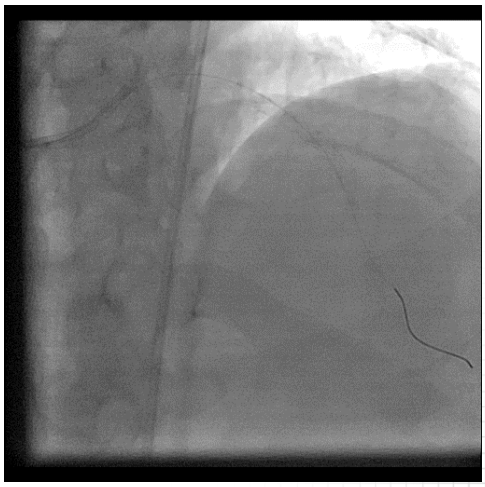
2018

Accelerated symptoms
New lad lesion
Plan pci of lad ; new approach for lcx



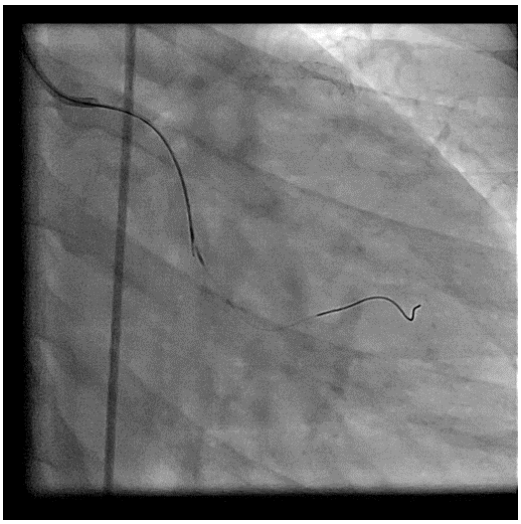
lad



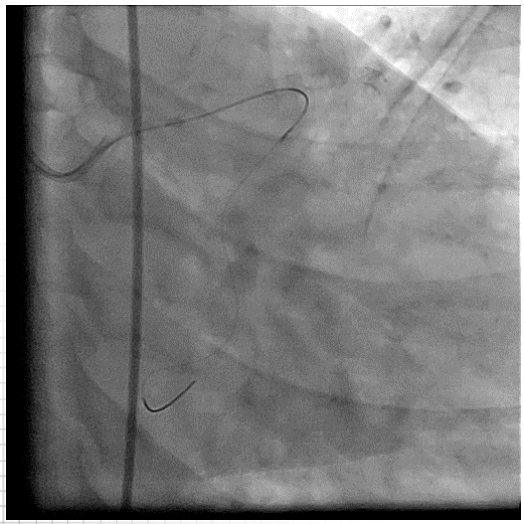


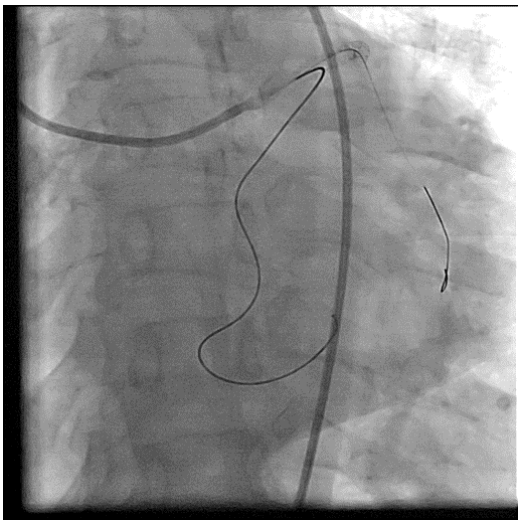
Re attempt for lcx

- Considering flush occlusion
- After a brief attempt with a dual microcatheter
- We went for a retro approach

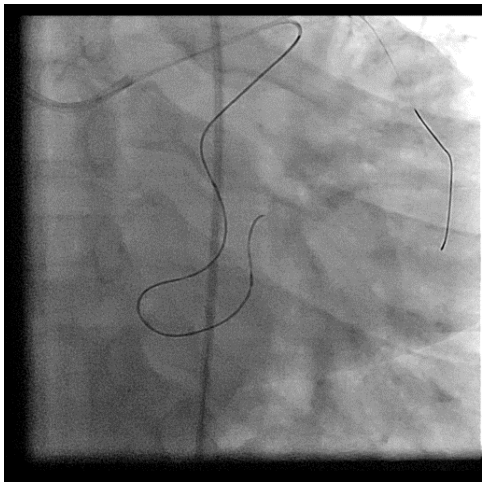


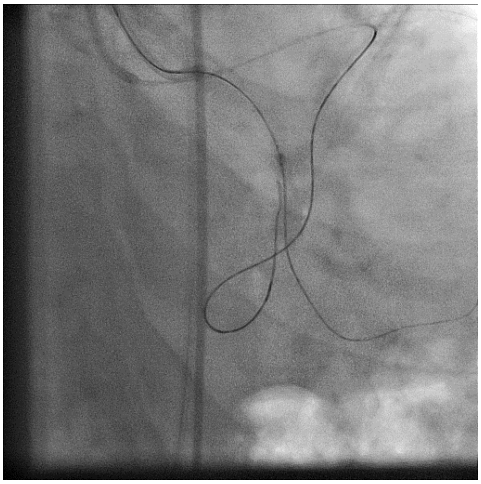
a 150 caravel passed stent struts
+ lad safety wire



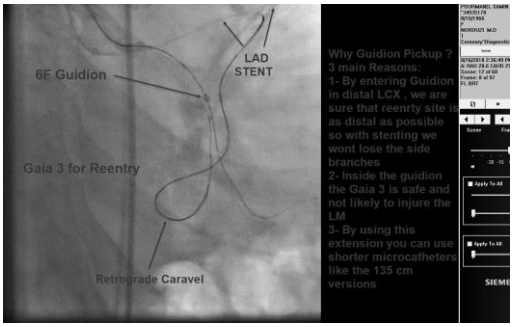


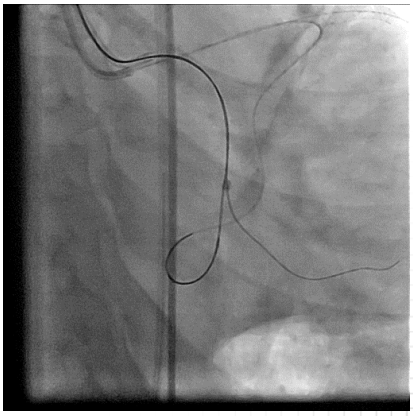
Used ping pong guides & guidion pickup

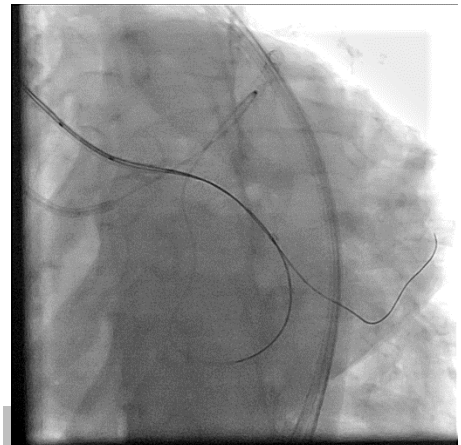




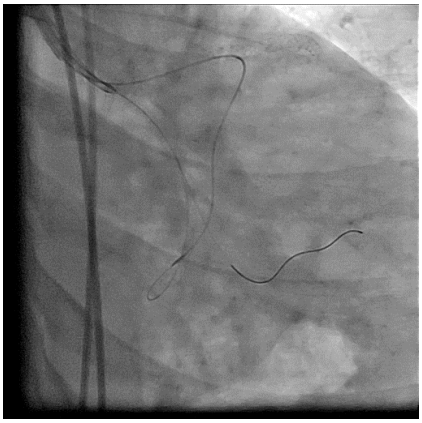
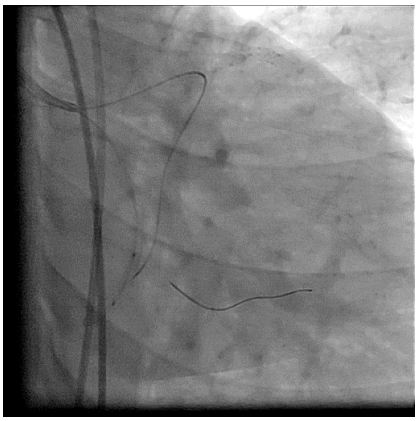
Why Guidion pickup ?



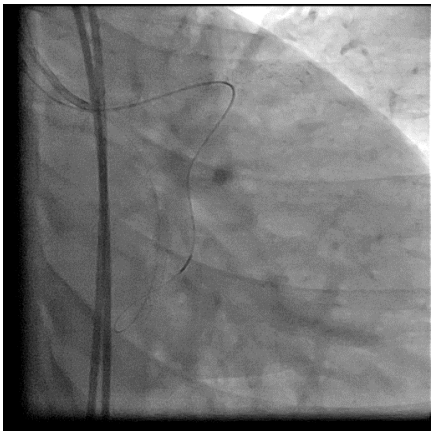




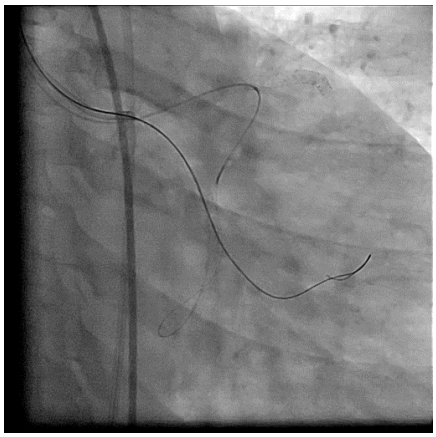
Stenting but during the postdilation the om side wire came out

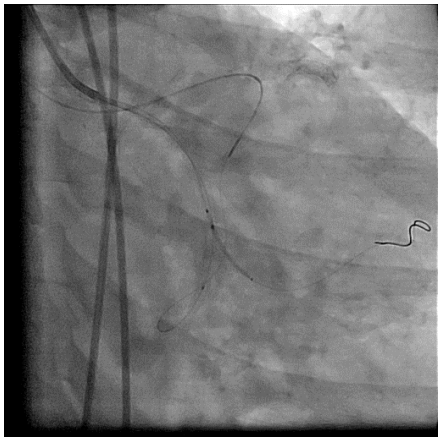



Lost the side !!

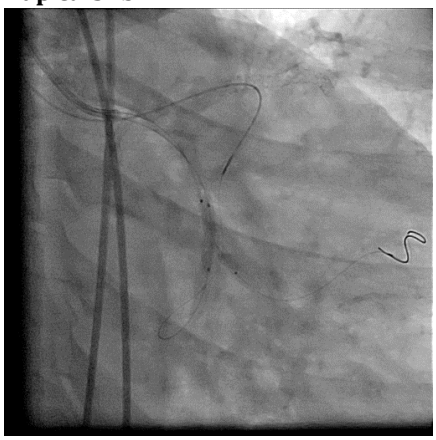



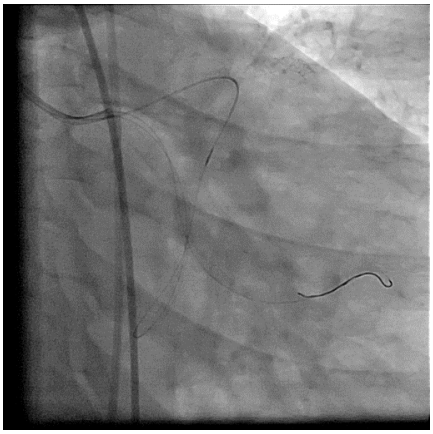
Difficult rewiring, balloon ; changed wire to safe soft



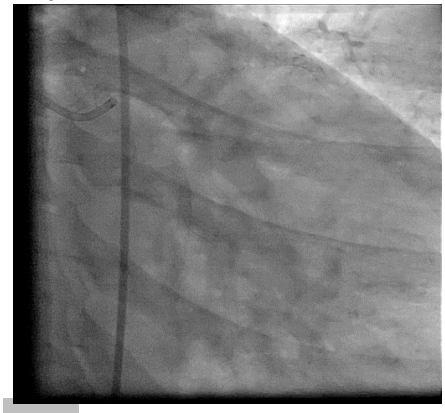


Tap & fskb





final

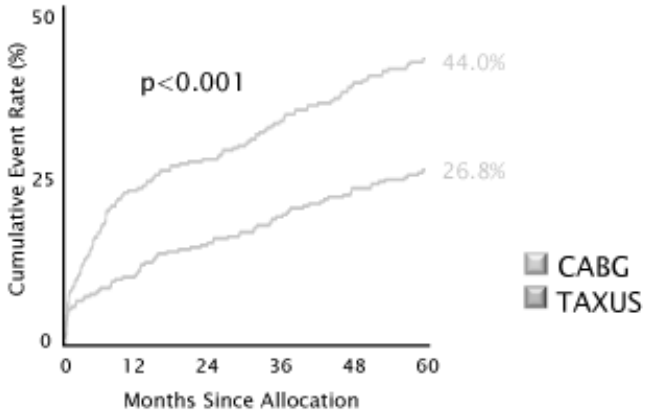


Sever calcified Left main ostial stenosis: Rotablation ,IVUS ,stenting

Yaser Jenab MD
Associate Professor of Cardiology
Tehran Heart Center

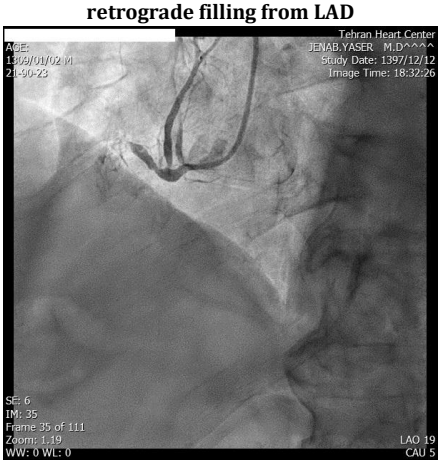
Case presentation

89 year old retired male physician
Stable angina with FC3
Risk factor: Hypertension, Hyperlipidemia
Echocardiography: Ejection fraction =45%
SYNTAX Score I= 43
Refused CABG

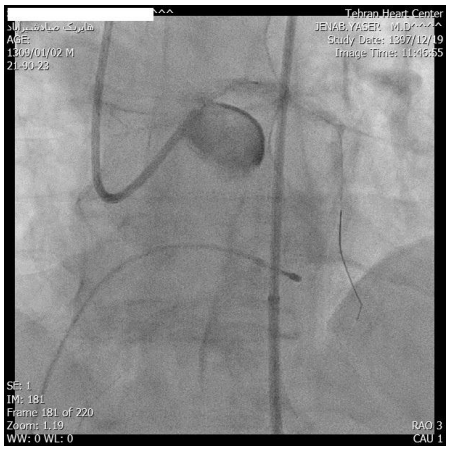


Severe LM and LAD calcified stenosis

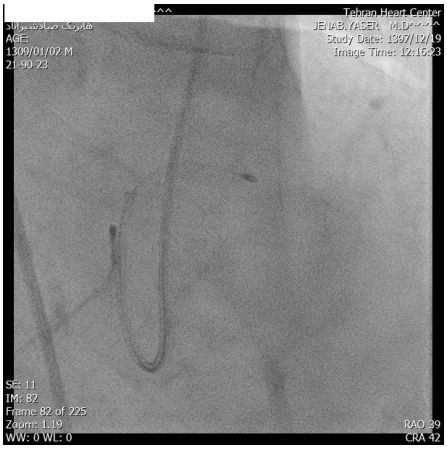
RCA occlusion with retrograde filling from LAD



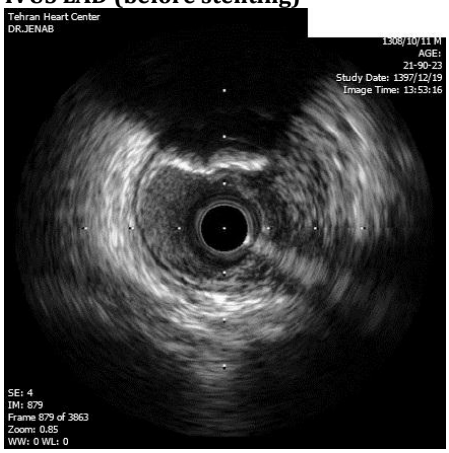
Predialtion; 2*15



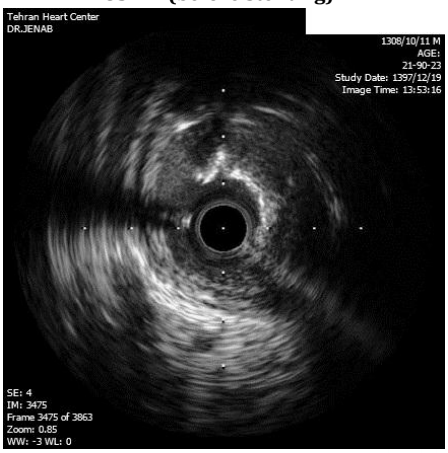
Rotablaton: 1.75 burr



IVUS LAD (before stenting)

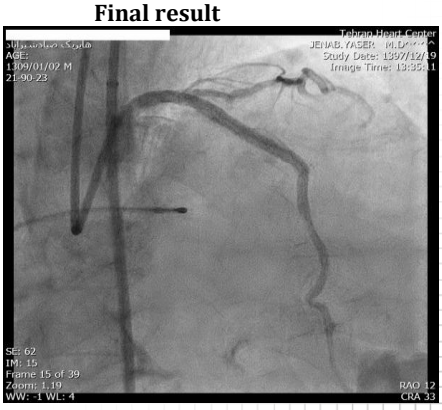


IVUS LM (before stenting)

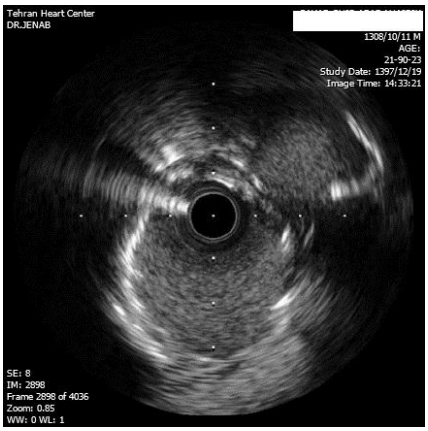


Stents: 3.5*24 and 4*28

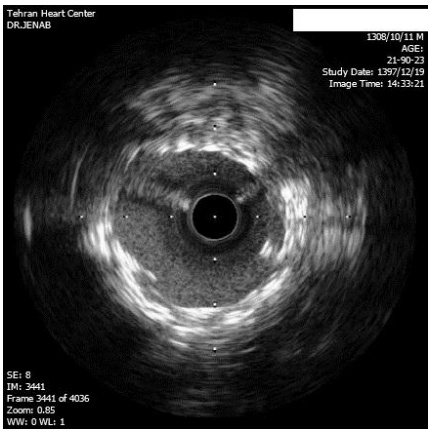
Final result



IVUS LAD and LCX ostia



IVUS LM after postdilation



Early Aortic Erosion After Percutaneous Closure of a Small Atrial Septal Defect

Zahra Khajali
Rajaei Cardiovascular Medical and Research Center

Introduction

- Percutaneous closure of atrial septal defect (ASD) with the different type of atrial septal occluder (ASO) is an acceptable method.
- There are several known complications during and after the procedure such as arrhythmia, embolization of device, cardiac erosion, and residual shunt.

case

- A 30-year-old woman that her ASD diagnosed during infertility workup referred to our center.
- Transthoracic echocardiography (TTE) showed 10 mm ASD secundum with sufficient rims except aortic rim with 2 mm length.
- Intra procedure transesophageal echocardiography showed 10 mm ASD with insufficient aortic rim and in sizing balloon with stop flow technique, waist diameter was measured 12 mm.

Procedure

ASD was closed with occlutech device (Occlutech AB, Helsingborg, Sweden) size 13.5 mm successfully.

complication

The patient had severe chest pain, tachycardia, and hypotension 12 hours after the procedure and seizure-like movement and decrease in consciousness occurred.
In TTE pericardial effusion (PE) reported and due to progressive PE, patient refers to surgery room immediately.

surgery

The surgeon reported tearing of Sinus of Valsalva (non-coronary). After removal of the device, surgical closure of ASD and repair of Sinus of Valsalva was done.

3 days after surgery, TTE showed no residual ASD and no pericardial effusion and patient discharged 2 days later.

Conclusion

- Aortic erosion is a rare but catastrophic complication.
- In many studies mentioned that large device and insufficient aortic rim are predisposing factors for aortic erosion.
- This case alert that any pericardial effusions after ASD closure most notice even with small device occluders.

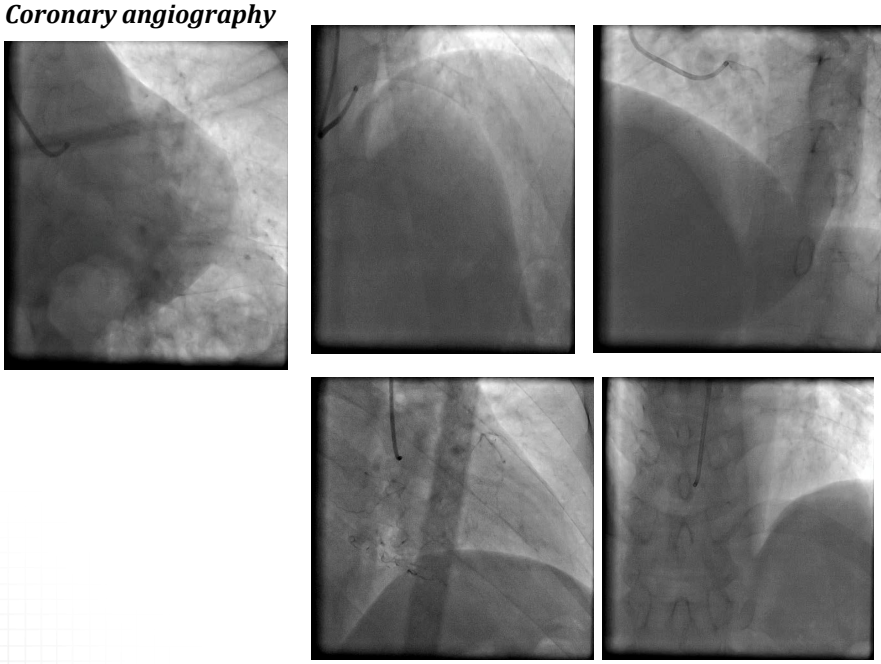
CTO PCI on a small caliber LAD

Afsaneh Mohammadi , MD

A 52 Y gentleman

- RF: HTN , FH
- Typical angina FC=2
- ECG: unremarkable
- ECHO: NL EF , No resting RWMA
- SPECT : large ischemia on LAD

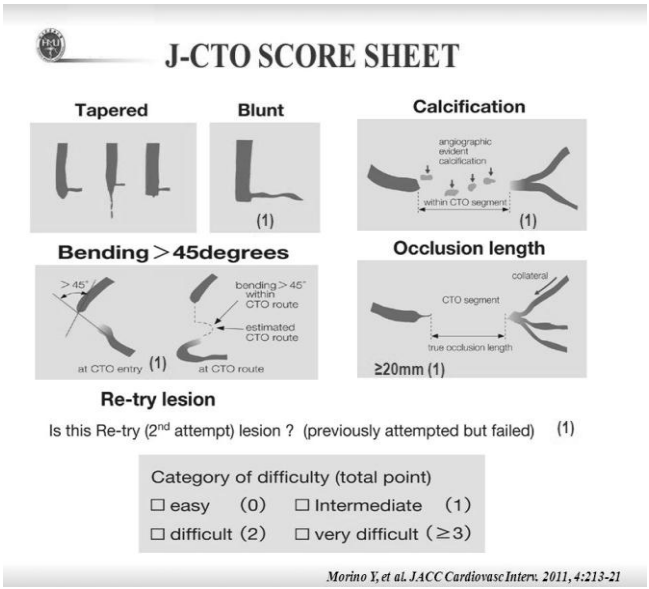
Coronary angiography



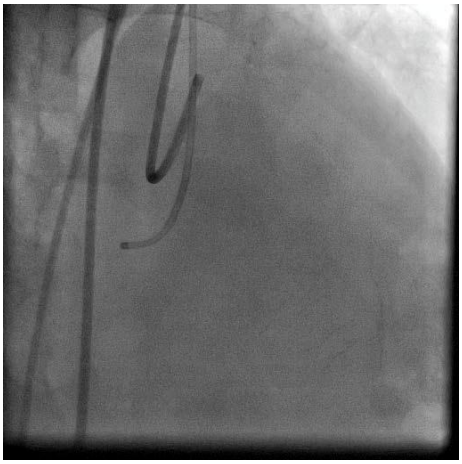
What s next?

2VD , CTO LAD , OSTIOPROXIMAL involved , mid portion of RCA

- JCTO score : 2
- CABG
- PCI

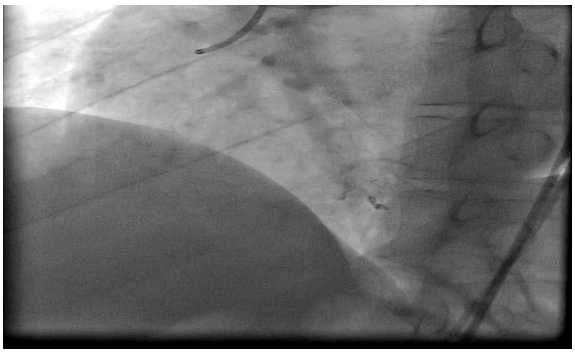


- BI FEMORAL (GC JR4-6 & SPB 3-7)
- BIDIRECTIONAL INJECTION

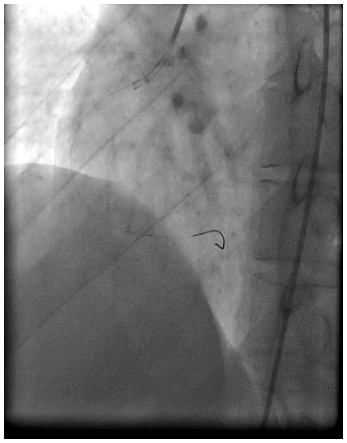


PCI PLAN

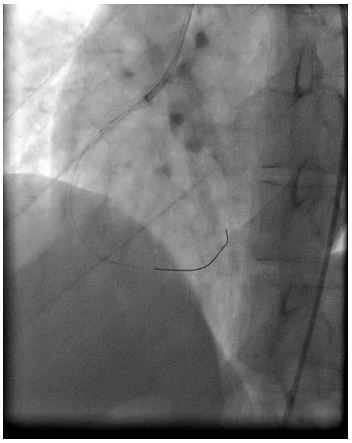
- AWE
- Retrograde approach (septal or ipsilateral collateral)



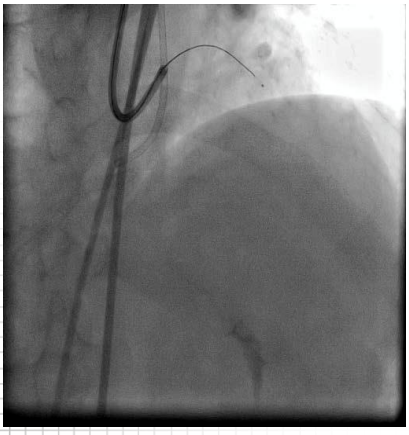
Chest pain,sin bradycardia & hypotention

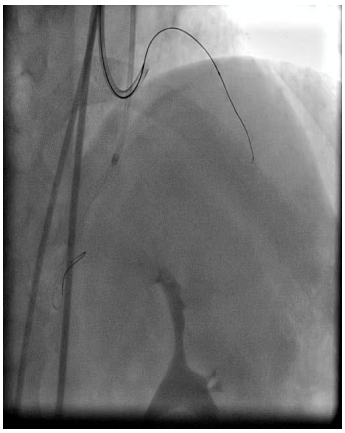


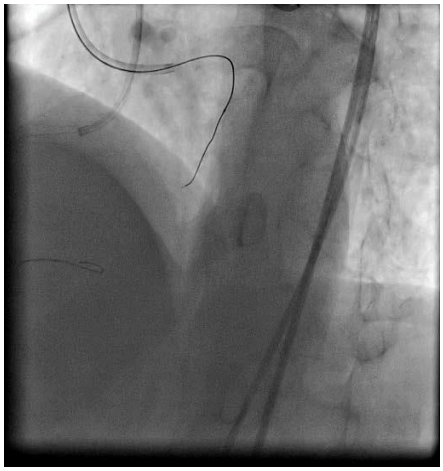
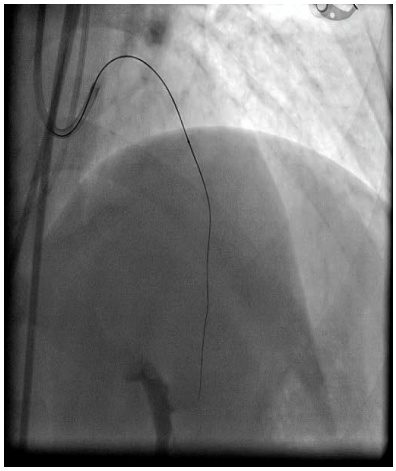
MC : fine cross 130



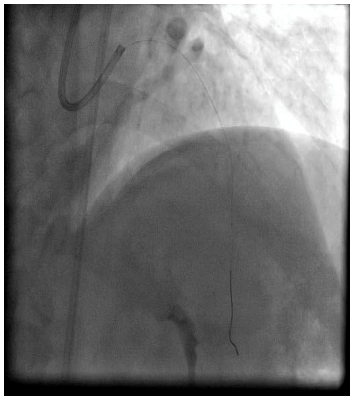
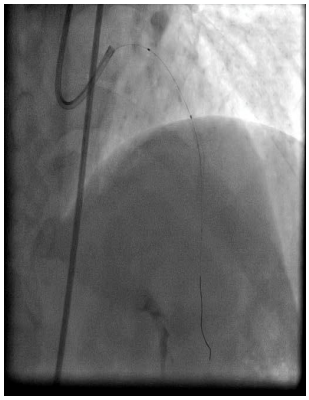
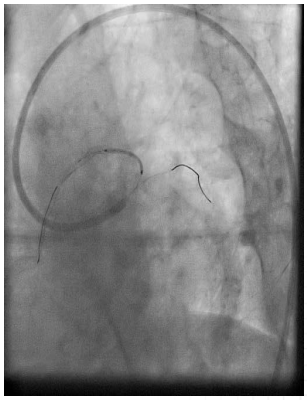
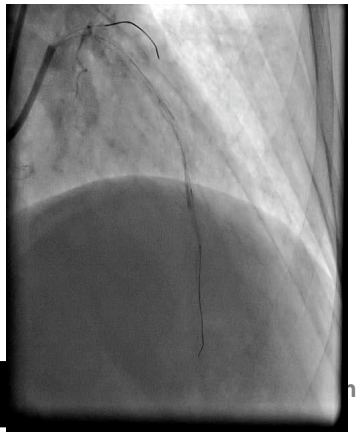
 Wire: fielder xt Gaia 2





1.25-15 Tazuna
Trap it balloon

Final ***result***

❊ ❊ ❊

How Should You Deal with Transcatheter ASD Closure Complications?

Akbar Molaei MD
Congenital interventional cardiologist, Tabriz University of medical sciences, Tabriz, Iran

Transcatheter ASD closure is an easy and impossible procedure.
Various factors contribute to the above mentioned situation.
Major complications related to transcatheter closure of secundum atrial septal defects (ASDs) and patent foramen ovale (PFO) appear to be rare.
The majority of complications occur during the implant procedure. However, it has become clear over the past decade that complications—particularly erosion, arrhythmia, and thromboembolism—although rare, may occur long after device implant. Thus, an appropriate frequency and duration for routine postprocedure surveillance has yet to be defined.
Considering the above mentioned, paying attention to the some points, is necessary to prevent the occurrence of complications & the success of the procedure.
For this reason, the operator must be prepared to deal with and handle these complications.
In this report, we present some of the issues that have occurred and of course how they are managed.

The inferior vena cava stent in a child with Budd-Chiari syndrome: A case report

Hojat Mortezaeian
Rajaie Cardiovascular, Medical, and Research Center

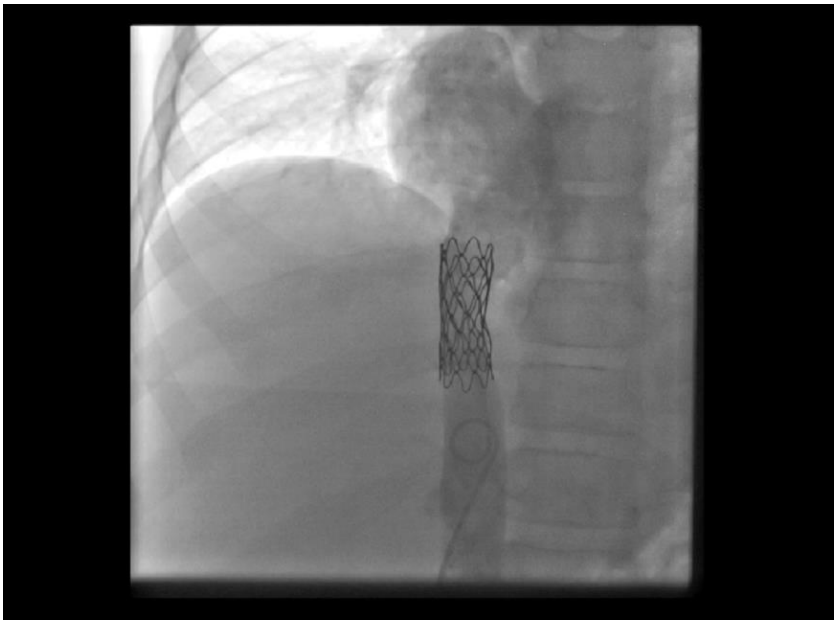
Introduction

- BCS defined as hepatic vein outflow tract obstruction located in hepatic veins or inferior vena cava (IVC) or both of them.
- The prevalence of BCS is about 2.40—33.10 per million.
- One of the causes of Budd-Chiari syndrome (BCS) is membranous obstruction of the inferior vena cava.

This study reports a 9 years old boy with a history of abdominal pain, nausea, and fatigue. In physical examination, he had hepatomegaly and hydrocele.

- Abdominal sonography showed thrombosis in hepatic veins and a suprahepatic portion of IVC.
- Echocardiography showed normal cardiac function and thrombosis in IVC.
- In imaging reports, no evidence of an abdominal mass or compression effect on IVC was depicted.
- In MR venography with Gadolinium filling defect and severe stricture of intrahepatic to supra hepatic portion of IVC was depicted.
- In angiography, IVC injection showed interrupted IVC.

At first, the wire pass from IVC to PA and then balloon angioplasty was performed with power flex 10/30 mm. IVC stent was done with CP stent 39 mm and BIB balloon 14/40 mm successfully.



Percutaneous stent angioplasty can be considered the first-line management for BCS patients with membranous obstruction of IVC because of its minimal-invasive method.

Coronary perforation

Dr. AR Moloudi, Dr. M Dehghan, Dr. D Kazemi Saleh

Classification

•The most frequently adopted classification is proposed by Ellis in 1994

	Morphology	Clinical Sequelae
Type I	Extraluminal crater without extravasation	Almost always benign, treated effectively with stent placement.
Type II	Pericardial or myocardial blush without contrast jet extravasation and without a ≥1-mm exit hole	Can result in late presentation of tamponade, requires close observation.
Type III	Extravasation through a frank perforation with a ≥1-mm exit hole.	High risk of tamponade, requires reversal of anticoagulation and immediate treatment.
Type III—Cavity Spilling	Perforation into an anatomic chamber, such as coronary sinus, atria, or ventricles.	Can often have a benign course, may result in fistulae formation, large perforation requires repair to avoid coronary steal.

Incidence

•The incidence of Coronary Artery Perforation (CAP)has not changed significantly over two decades.

• It is reported between 0.2% and 0.9%.

Outcome

- Blood loss
- Distal ischemia, MI
- Pericardial Tamponade
- Cardiogenic shock
- Death

Lesion characteristics

- Calcification
- Tortuosity
- Eccentric plaque
- AHA/ACC class B or C lesions
- Small caliber vessel

Predisposing Factors

- CTO–PCI
- Oversized compliant balloons (balloon-to-artery ratio >1.2)
- High inflation pressure
- Hydrophilic and stiffer wires
- Calcified and tortuous arteries

Management

- Double Guiding catheter
- Reverse Anticoagulation
- Covered Stent
- Pericardiocentesis
- IABP
- Emergency CABG

History

- A 50 years old Man suffers of Typical Chest pain since 6 months ago
- RF Hyperlipidemia
- FC II-III NHA
- Positive MPI
- Coronary CT Angiography showed significant lesion at Mid part of LAD with good Distal Run off
- ECG Normal
- EF by Echo = 55%

Complication with Catastrophic Result

**Dr. Behshad Naghshtabrizi, Dr. Azadeh Mozayanimonfared ,
Dr. Nima Naghshtabrizi**

The patient was 41 years old woman with the history of hyperlipidemia and positive family history of CAD, who suffered from anterior STEMI (figure 1,2) and underwent fibrinolytic therapy. According to echocardiography LVEF was 25-30%. For evaluation of ischemia and viability, myocardial perfusion scan was performed. The result of scan showed stress induced ischemia in the apex, antroseptal, septal, anterior and inferoseptal wall and apical inferior segment with component of nonviable myocardium in the apical antroseptal segment (SDS: 16). So she candidate for SCA. The SCA result was: RCA was slow washout and significant stenosis at mid part of LAD (figure 3). So she candidate for PCI on LAD. Left main engagement was performed by guiding catheter. Left main was dissected (figure 4) and it's dissection was expanded to well-developed diagonal and LAD (figure 5,6). The patient was transferred to operating room in less than 30 minutes and on pump CABG was performed (LIMA on LAD, SVG on Diagonal and LCX). Patient was transferred to ICU. Due to unstable hemodynamics, at first inotrope therapy was prescribed and in order to unresponsiveness IABP was inserted. After 2 days she experienced respiratory apnea and after more than 30 minutes resuscitation, she was passed away.

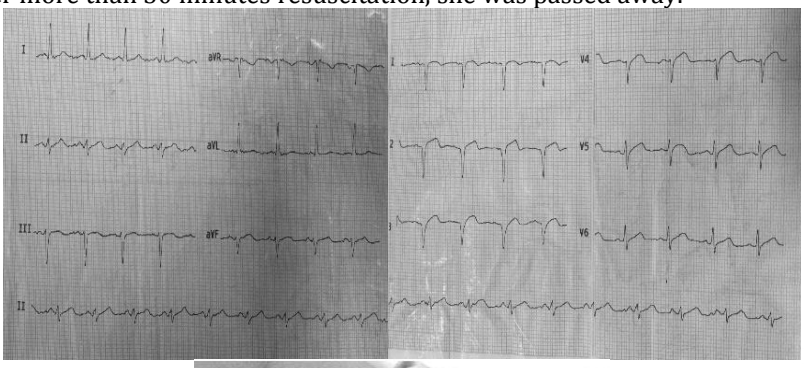


Figure1

Figure2

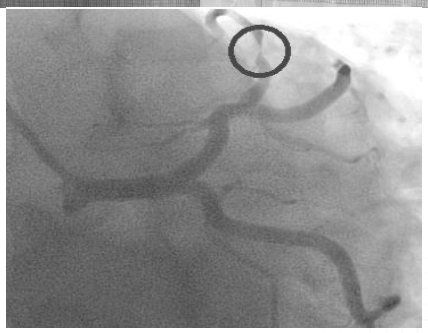


Figure3

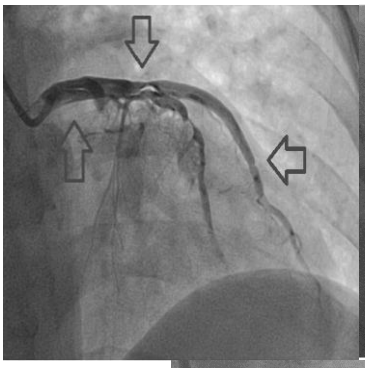


Figure 4.

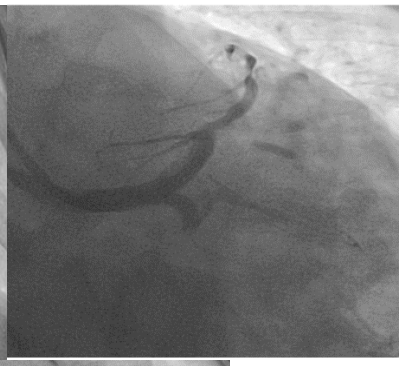


Figure 5.

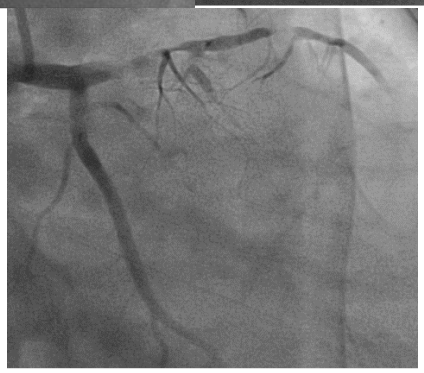


Figure6

Coronary Artery Aneurysm Presenting with Acute Inferior Wall Myocardial Infarction

Dr. Alireza Nematollahi, MD
Assistant Professor at Isfahan University of Medical Science

Background: Coronary artery Ectasia (CAE) or Coronary artery aneurysm (CAA) is characterized by an abnormal dilatation of the coronary arteries. CAA has been defined as localized or diffuse dilation of the coronary arteries more than 1.5 times the diameter of an adjacent healthy reference segment on coronary angiography. Although small CAAs are occasionally encountered during coronary angiography, aneurysms greater than 50 mm are quite rare with an estimated prevalence of around 0.02% Overall incidence of CAE has been reported to be as low as 1.2%. CAE/CAA is three times as common in males. Smoking has been reported to be more common in patients with CAE/CAA than in patients with coronary artery disease. Atherosclerosis is considered to be the most frequent (50%) cause of CAE/CAA, whereas 20% to 30% cases of CAE/CAA are caused by congenital anomalies. Only 10% to 20% of cases of CAE/CAA have been reported resulting from inflammatory or connective tissue diseases (Kawasaki disease, connective tissue disorders, Marfan's syndrome and arteritis). Most coronary aneurysms are asymptomatic; however, they may present with angina, myocardial infarction, or sudden death. STEMI can be caused by distal embolisation or a thrombus occluding an ectatic segment of coronary artery. Local thrombus formation due to stagnant local blood flow has been suggested as a cause of coronary thrombosis in CAA presenting with acute myocardial infarction.

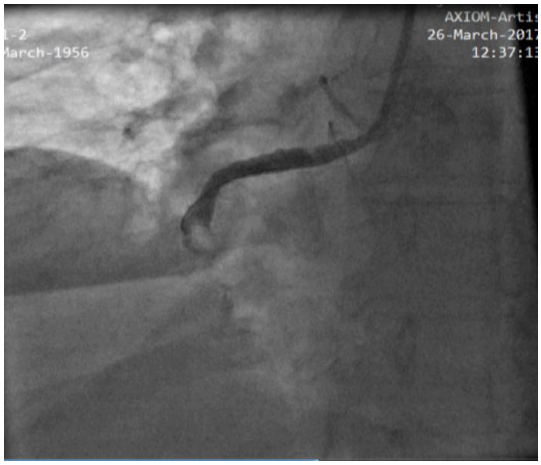
Complications such as acute rupture into a cardiac chamber or pericardium may occur. Coronary-cameral fistulae have also been reported rarely. Other complications include thromboembolic phenomena and compression of surrounding structures. CAA may be detected by noninvasive tools like echocardiography, CT angiography, and CMR imaging. However, coronary angiography can still provide valuable information about size, shape, location, and coexisting abnormalities, such as narrowing of the coronary arteries. Giant CAAs (CAA with a diameter more than 20 mm), on the other hand, have a tendency for complications, including rupture, and may present as a mediastinal or intracardiac mass. The literature suggests that surgery is the preferred approach for giant CAA. Proximal and/or distal ligation, resection with end-to-end anastomosis, or the use of an interposition vein graft have all been used, usually in conjunction with coronary artery bypass graft (CABG). However, a combination of low-dose aspirin with warfarin (internationalized normalized ration [INR] goal of 2.0 to 2.5) has also been used in giant aneurysms to prevent thrombosis.

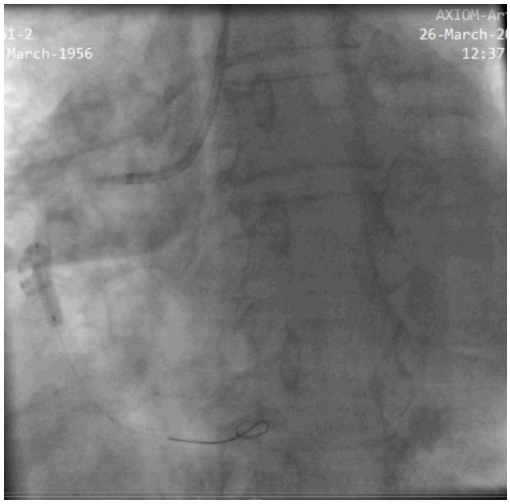
The optimal management of CAE has not been firmly established. Proposed therapies include aspirin and chronic anticoagulation. Nitrates can increase epicardial dilation, thereby exacerbating myocardial ischaemia and causing angina pectoris in patients with CAE. As such, nitrates should be avoided in patients with isolated CAE.

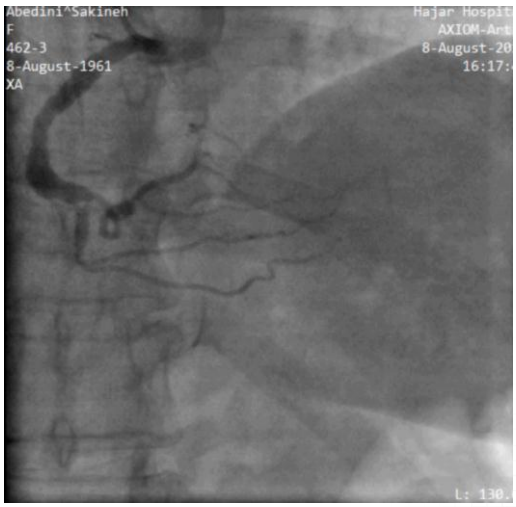
CASE Presentation: A 56-year-old female patient presented with severe, crushing chest pain one hour after the onset then was treated with ASA 325 mg , 600 mg clopidogrel ,Atorvastatin 80 mg and reteplase 20 mg in another center. Patient refered to our center for rescue PCI because persistent chest pain , ST elevation and ventricular tachycardia (VT). Her initial ECG showed ST-segment elevation in leads II, III, aVF and V7-V9.Echocardiography showed, LVEF=45% with inferior wall hypokinesia ,AI 2+, 3 cuspid AV, normal aortic size without intimal flap or PE. Upon physical examination, her heart rate was 55 bpm and arterial blood pressure was 100/70 mmHg. The troponin I level was elevated (7.5ng/mL). Emergency coronary angiography showed aneurysmal dilation of left anterior descending artery (LAD) and left circumflex artery (LCX).Then VT&VF occurred during second injection of left coronary artery, followed by cardiac arrest. Immediately CPR and D.C cardioversion was performed .The patient's rhythm became sinus and the hemodynamic became stable.Then right coronary artery (RCA) injection showed total thrombotic occlusion in mid part. There was a large thrombus burden within the aneurysmal segment of the RCA. The decision to attempt primary percutaneous coronary intervention (PCI) on the RCA. Due to the angiographic evidence of a heavy thrombus burden, we attempted PCI using repetitive coronary aspirations with a 6-French Export Catheter (Medtronic, Minneapolis, MN) for thrombus extraction. However, the lesion was resistant to repetitive aspirations and the blood flow was not restored and because multiple run of VT, repetitive balloon(2*18 mm) predilation was done. Unfortunately, the large partially organized thrombus was resistant to repetitive balloon predilation and the blood flow was not restored. Intracoronary thrombolysis and integrilin was not performed in consideration of the potential bleeding risk. Finally prolonged balloon inflation with one and simultaneously two balloon(3*18 mm) with in aneurysmal segment of the RCA induced deformity of partially organized Spherical thrombus and TIMI 3 flow was restored in right PDA branch and her ECG showed ST-segment resolution. Stenting of RCA did not performed, and she received infusion of heparin,oral clopidogrel and ASA. The patient was discharged on triple therapy (Warfarin, Aspirin, and Clopidogrel). We advised to repeat coronary angiography after four weeks of triple therapy but the patient did not accept. Clopidogrel was stopped after four weeks, and the patient remained on long-term aspirin and warfarin. Finally, follow-up coronary angiography five months later showed a restored normal Thrombolysis In Myocardial Infarction grade (TIMI) 3 flow. Therefore, long-term oral anticoagulation with warfarin and ASA was prescribed for outpatient follow-up.

Case Presentation

11th Middle East Cardiovascular Congress (MECC)
& 4th Clinical Cases in Complex Cardiovascular Therapy (CCCCT)



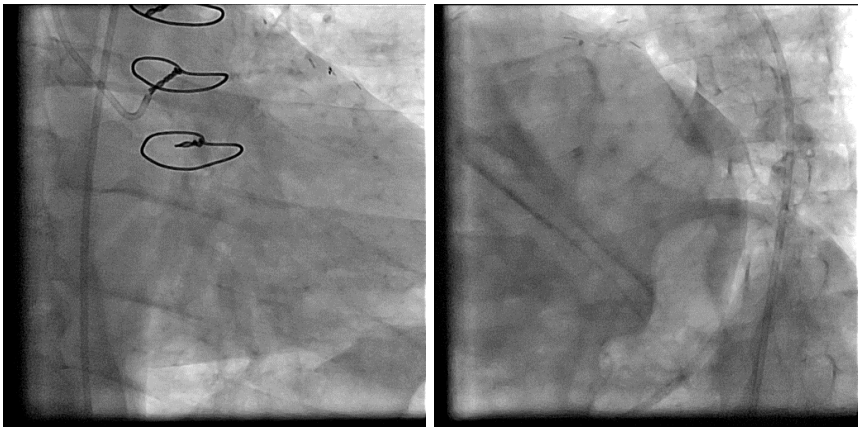




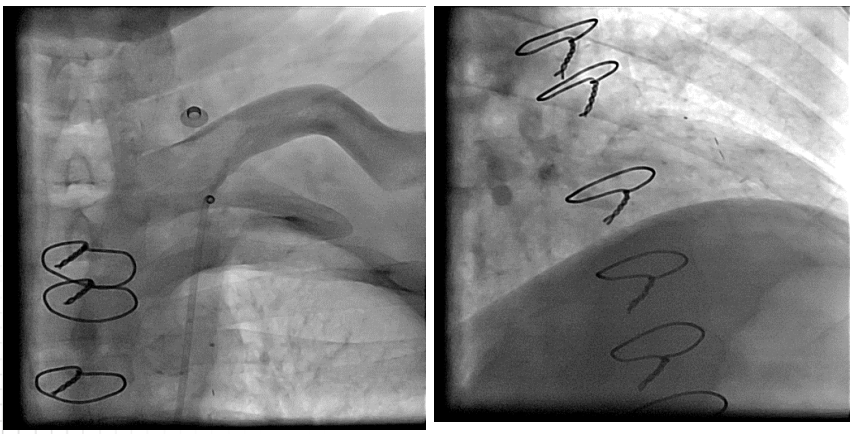
Retro Pci Of Rca Through Epicardial Channel With Guidion Assisted In Tip

- A 76 YEAR OLD MAN PRESENTED WITH TYPICAL CP
- LAD SUBTOTAL OCCLUSION
- LIMA TO LAD PATENT
- LARGE EPICARDIAL FROM DISTAL LAD TO RCA
- NATIVE RCA OCCLUDED FROM PROXIMAL PORTION
- SVG ON RCA OCCLUDED
- SVG ON LCX CRTICAL LESION STENTED 3 WEEKS BEFORE

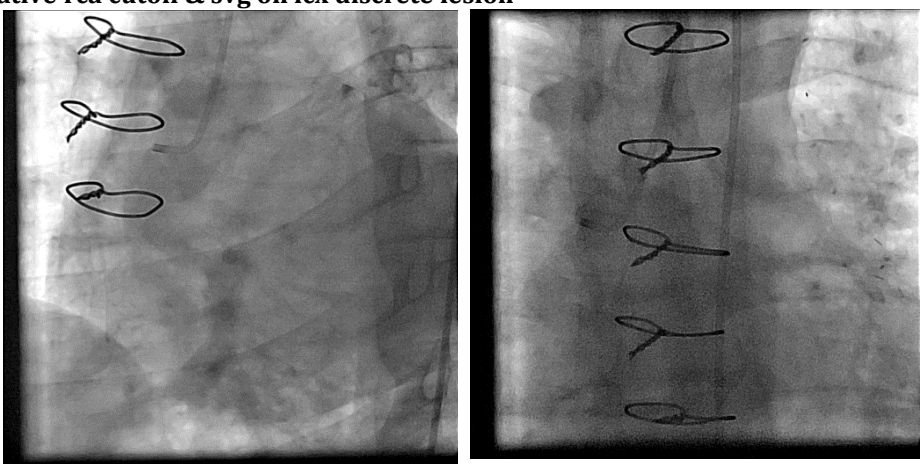
Angio: subtotal lad



Lima to rca epicardial

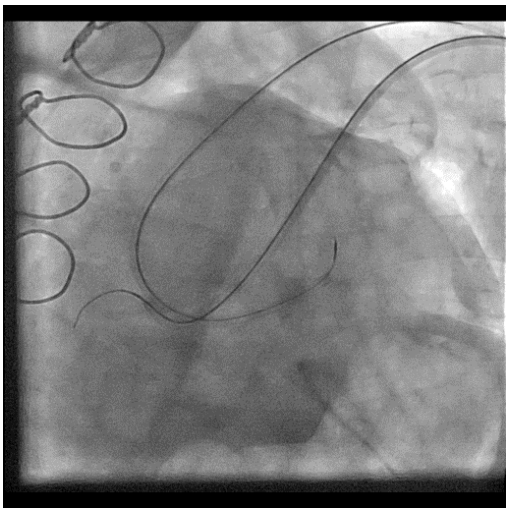


Native rca cutoff & svg on lcx discrete lesion

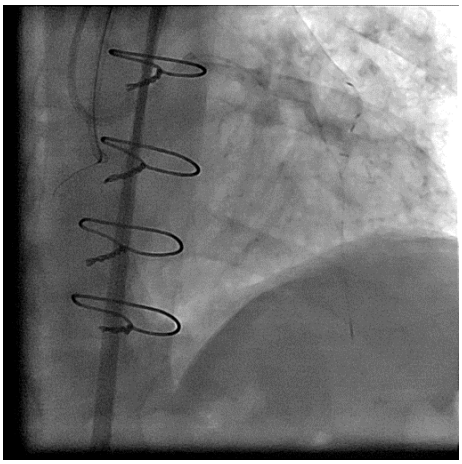


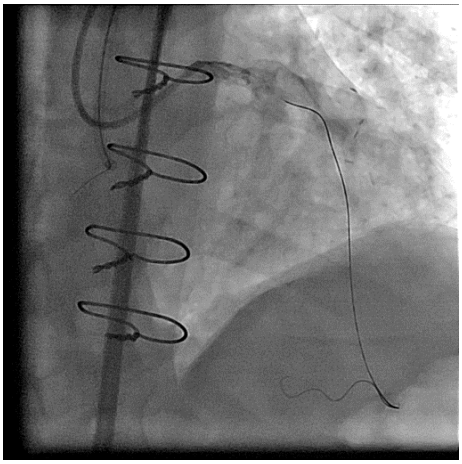
- Access to Distal Lad Although Possible From Lima
- Risk of Damage of Lima Seemed too High
- So Decided to Open Native Lad Temporarily use it as a Conduit to Access Distal Lad & Thus Epicardial Access

Passed Through Proximal Lad
To Access Distal Epicardial

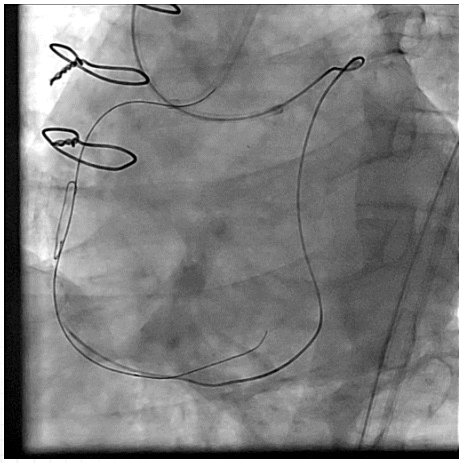


PASSED INTO DISTAL LAD

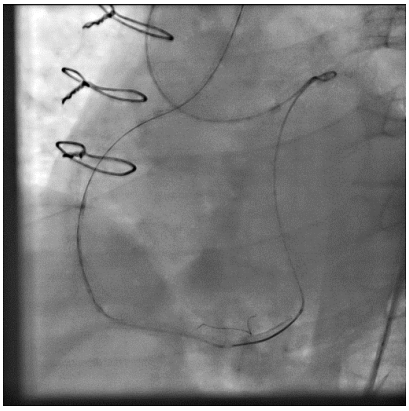


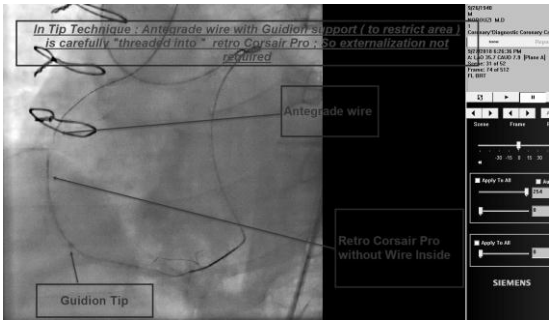


WIRING PLV & BALLOONING

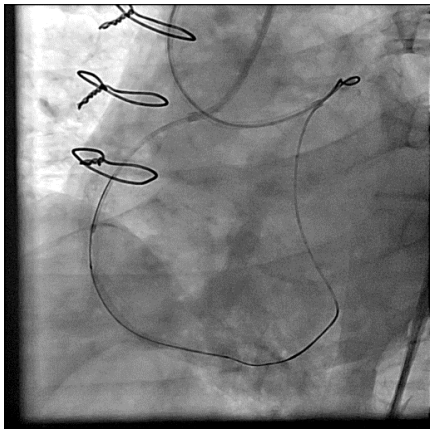


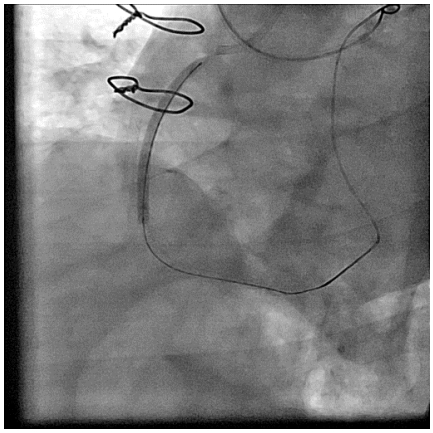
To Decrease Risk Of Epicardial Damage We Used A Guidion Assited In Tip To Finish Antegradely

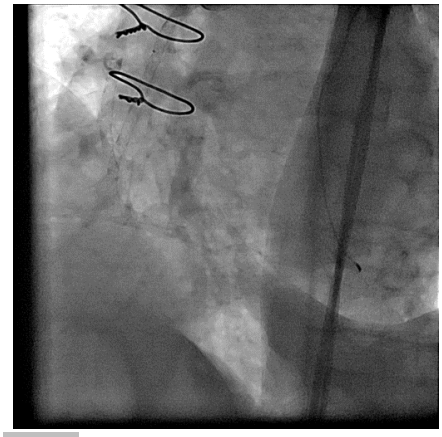


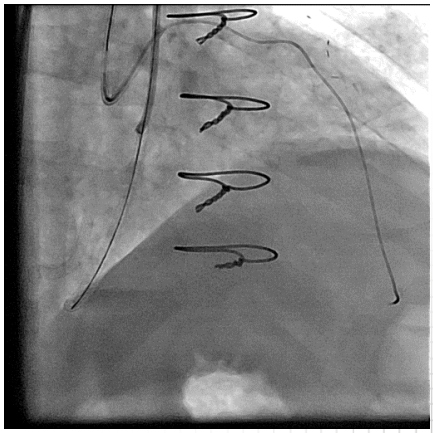


STENTING

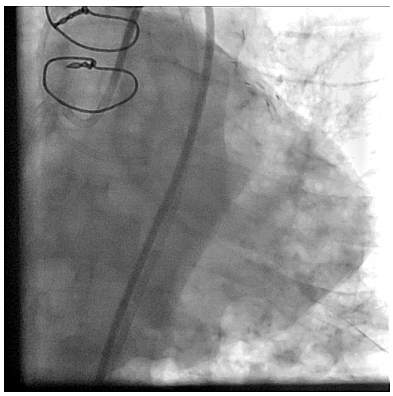


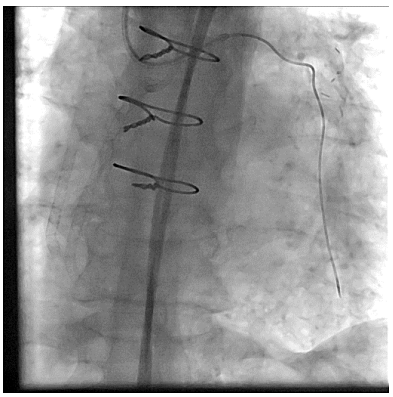






Check donor vessel & collateral





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Case Presentation

Dr Mohammadali Ostovan

A 62 years old man a case of CABG 1year ago presented with typical angina starting 1month after surgery coronary angiogram showed occluded vein grafts to om1,om2,pda also kinked and stenotic lima at sequential graft insertion site to diagonal before end LAD anastomosis the patient recommended for redo surgery but refused so staged PCI planned lima kinked distal stenosis Targeted first then proximal lima near its origin targeted ehich was a very hard lesion resistant to scoring balloon and ultrahigh pressure NC balloon.

PDA and CPV to SVC Stenting in a Newborn with Complex Cyanotic Heart Disease

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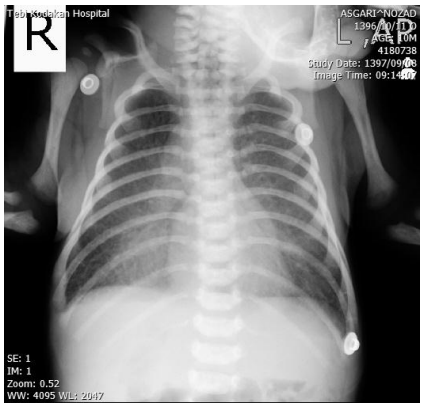
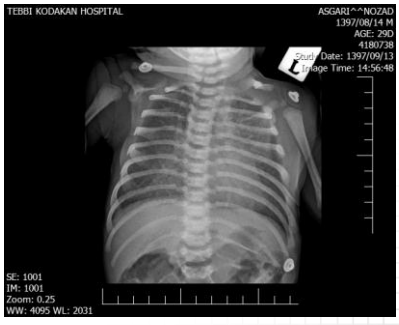
Children's Medical Center, Tehran University of Medical Sciences, ksayadpour@gmail.com

- A 6 days old newborn with severe cyanosis was referred to us. He was intubed and ventilated by ventilator while receiving prostaglandin infusion.
- Diagnosis: Right isomerism- Single ventricle (RV dominant) - Supra cardiac TAPVC with obstruction- Pulmonary atresia- CAVSD - Moderate AVVR- Right aortic arch- PDA- good size of PA branches (6mm)
- First Angio, left femoral artery, unsuccessful PDA stenting

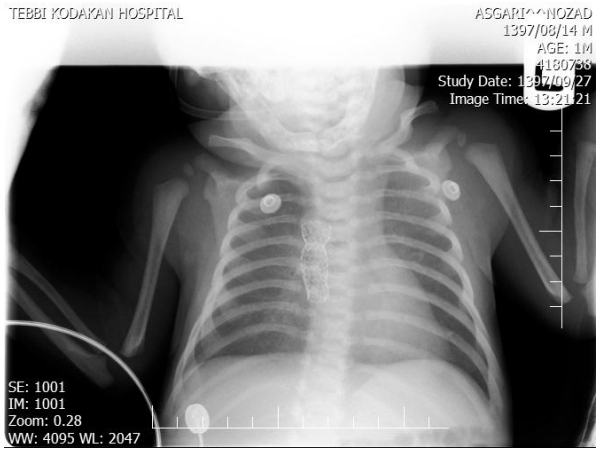


- Surgical consult -> they refused to operate him due to the complexity of his cardiac anatomy.
- Second angiography
- 14 days old
- Right axillary artery
- We successfully stented the duct by a Coroflex stent 3.5x19
- Prostaglandin discontinued
- Unable to wean from the ventilator



28 days

- ⊡ We successfully stented the obstructive connection of the confluence of pulmonary veins to the SVC by a Cook Formula stent size of 10x30
- ⊡ Weaned from the ventilator
- ⊡ O2 sat 66%
- ⊡ Discharged
- ⊡ He had 2 follow up visits and does well.



Conclusion: In an appropriate setting, it is possible to perform several palliative procedures for a newborn to survive him or her.
Key words: Obstructive TAPVR, PDA stenting, vein stenting

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Acute Limb Ischemia

Mahdi Sajedi Khanian[1], Drs.Roya Narenji Sani,Dr.javad Movahhedzadeh, Dr.samira Homaei,Dr.jamil Esmaeilian
1.Cardiology Department, School of Medicine, Sabzevar University of Medical Science, Sabzevar, Iran, Interventional cardiologist

Acute limb ischemia is defined as a sudden decrease in limb perfusion that causes a potential threat to limb viability. The clinical presentation depends upon the etiology and whether the patient has underlying peripheral artery disease. The management of acute arterial occlusion remains a challenge for vascular specialists. Surgical thromboembolectomy and bypass grafting were the mainstays of therapy for many years. Subsequently, thrombolytic therapy and percutaneous transluminal angioplasty (PTA) have become treatment options for selected patients The patient was a 76 years old woman presented with severely left upper extremity pain and pallor since 2 hours. She was nondiabetic and without history of CAD or CVA.She was Hypertensive with poor controlled of HTN with history of used Amlodipin and Hydrochlortiazide and ASA The vital sign of patient was (BP:175/95 , PR: 125 RR:26

T: 37.5 oral)when she entered in E.D.In physical examination irregular heart beat was obvious and ECG Clarified she had AF rhythm. Undetectable left radial and left ulnar pulse and brachial pulse was very weakly, left hand was very cold and with mild paresthesia. She had palpitation since 24 hours.Lab data declared below data.
BS:177
BUN:14 Cr:1.0
Na:141. K:4.1. Ca:9.9
CPK48. CPK MB:17
TPI:negative
PT:13. INR:1. PTT:40
WBC:10100. Hb:11. Plt:182000
Medical treatment was started for the patient with Anticoagulant(UFH) and Digoxin for control of HR and Atorvastatin and ARB for control of HTN and Narcotic for control of pain and Nitrocountine for control of HTN and beside that vasodilator.
Trans Thoracic Echocardiography was showded below data:
Mild concentric LVH,Good LV systolic Function,LVEF:55%,No RWMA at rest,Mild Diastolic dysfunction,Normal RV size and Function,Normal RA size and Normal LA size No MS,Mild MR ,No AS,Mild AI, Normal SPAP, No PE,Not seen LV clot
CT Angiography was done for the patient and was showed:
Thoracic Aorta and Abdominal Aorta had normal enhancement with normal caliber,without evidence of dissection or aneurysm,Left subclavian artery and left axillary artery had normal flow, Intraluminal filling defect was seen in proximal of brachial artery and not seen flow in ulnar or radial artery.
The patient was suffered from severely arm pain and she transfer to cath lab for conventional angiography. Selective left upper extremity angiography was done via right femoral artery and clarified Left Subclavian artery was normal. Proximal part of brachial artery was full of clot and was reduced flow in distal part.Confirme diagnosis that was Brachial Artery Thrombosis.
Then decided intervention for resolve of large thrombus with Catheter base thrombolytic therapy:
Via right femoral artery 6 French MPA1 catheter with multiple side hole was inserted in proximal part of brachial artery (inside of large thrombus) and thrombolytic was infused.
3 mg/h Alteplase was infused with pump infusion via catheter 500 u/h UFH was infused intravenously Transfer the patient to CCU for thrombolytic and anticoagulant therapy The patient was dramatically good response to this treatment and after 12 hours:
Arm pain was relief and his hand was became warm.
Therefore she transfer to cath lab for repeat angiography.
Completely resolved arterial thrombus with good run of flow in distal vascular bed The patient was discharge after 6 days on medication for control of HTN and anticoagulation for paroxysmal AF.
Conclusion : Catheter-based thrombolytic therapy is primarily reserved for patients with acute limb ischemia and a viable extremity. We agree with recommendations made in major society guidelines that catheter-based thrombolytic therapy is effective and beneficial and is indicated in patients with acute limb ischemia of fewer than 14 days duration in those who have a low risk for developing myonecrosis and ischemic nerve damage during the time period required to achieve revascularization.

Iatrogenic Aortic Dissection During PPCI

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1.Cardiology Department, School of Medicine, Sabzevar University of Medical Science, Sabzevar, Iran, Interventional cardiologist

The patient is a 48 years old man who presented with severe chest pain since 2 hours and he had ST elevation of inferior leads that identifies inferior STEMI.
He had blood pressure:100/65 and sinus bradycardia with pulse rate:45 and respiratory rate:16.
He was nondiabetic and heavy smoker. Selective coronary angiography was carried out via right radial access using 6 French sheath and revealed advanced three vessels diseased.
LAD and LCX had CTO lesion and large Ramus intermedius had significant proximal lesion.
Dominant RCA was totally occluded from proximal part due to inferior STEMI.
Primary percutaneous coronary intervention was started and regarding the tortuosity of the vessel the amplatz guiding catheter was used for coronary intervention.
The wiring of the vessel was carried out easily with a work hours wire and after predilation by (2.5x10), the third degree TIMI flow was obtained.
After blood flow to the RCA, collateral to LAD were seen.
Unfortunately, after the deployment of stent in culprit lesion (3x24 DES), the coronary dissection was occurred and dissection flap retrogradely interred to aortic root.
Aortic root dissection rapidly expanding after contrast injection.
Due to the patient's condition, we had to continue to intervention and put another stent (3×28 DES) to cover the dissected flap and then post dilatation by NC balloon (3.5x15) and flare of aorto-ostial segment.
Fortunately, the dissection of aorta has not progressed and the blood flow is appropriate for the distal part, and the patient's pain was reduced and hemodynamic of the patient was also stable.
The patient transfer to CCU and he was discharged from the hospital after a one week.
Transthorasic echocardiography was showed acceptable EF(40%) with good valvular function, without any dissection flap in aorta, TEE was not available.
He was referred to the surgeon after thirty days for the CABG.He underwent successful CABG and was discharged from the hospital with a good general condition.
Now, after 10 months of follow up, the patient has a satisfactory cardiac function.Aortoostial dissection is a rare and potentially life-threatening complication of Percutaneous Coronary Intervention (PCI). Coronary dissection is a trigger for progressive extension of the dissection into the coronary ostium and sinus of valsalva, which finally propagates to the ascending aorta . The prognosis and treatment of choice for this entity have not been well described and both surgical intervention and ostial coronary stenting have been reported in the literature.

Obligatory PCI in LM+3VD patient using rotablator

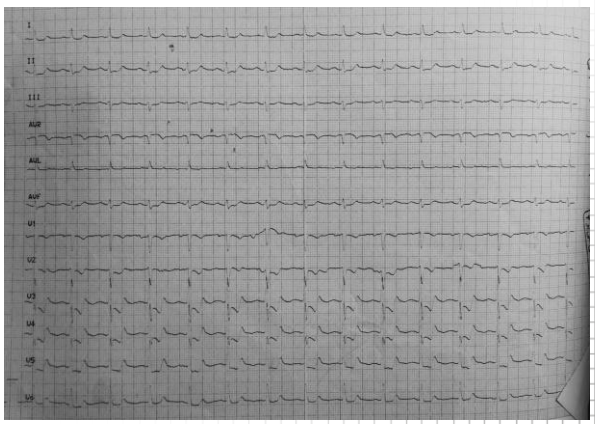
Mojtaba Salarifar MD, Mohammad Saadat MD

History and Past Medical History

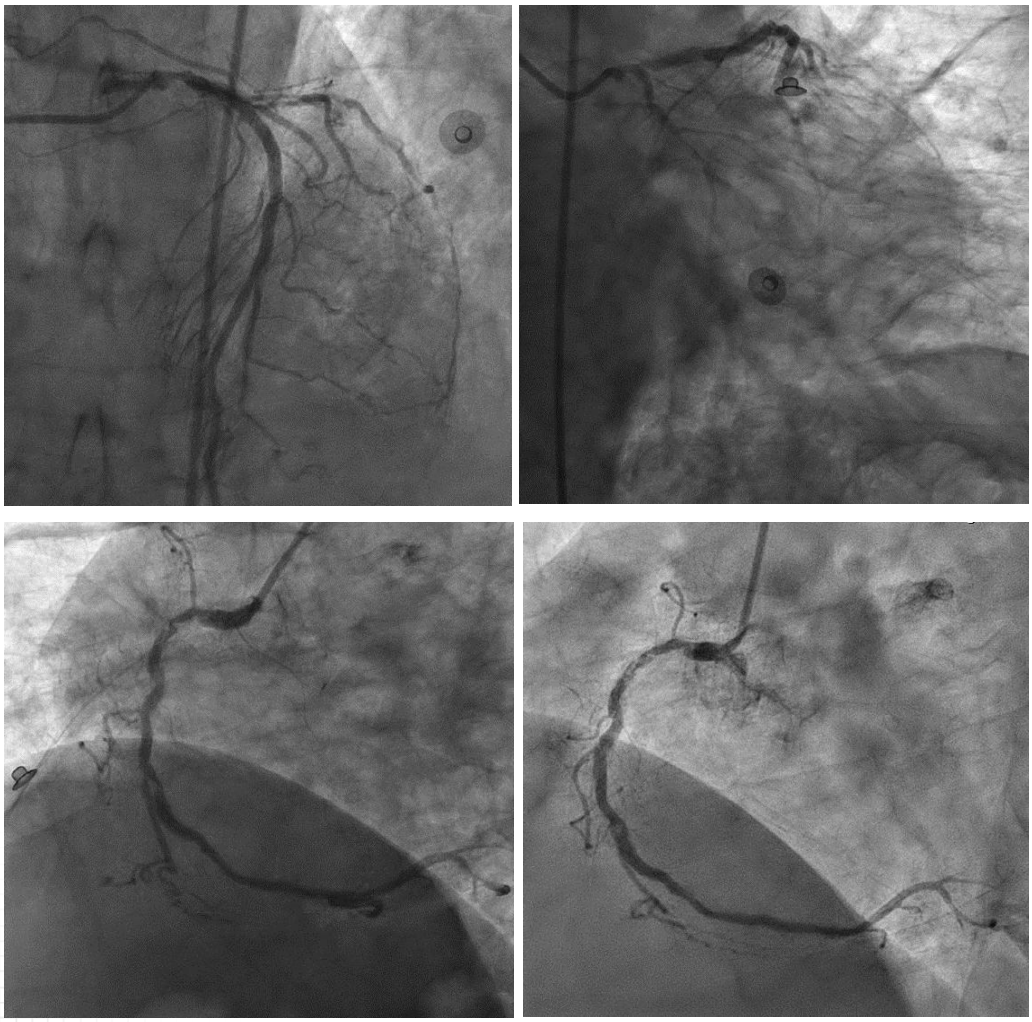
- 76 years old man
- DM - / HTN + / Smk - / Opium +
- CKD (Cr : 1.6 to 1.8)
- History of peptic ulcer without GIB
- Recent aggravating ECP/ FC III
- ETT : Less than 2 minutes, Highly positive
- ECG : NSR, Borderline axis, No significant ST-T change
- Troponin: - / Cr: 1.7
- EF: 45% - 50%, RWMA in anterior and posterior circulation, mild MR
- History of PCI:
- 1388 - PCI on LAD – Taxus 2.75*32
- 1388 – PCI on RCA – Vision (3*12 – 3*23)
- CAG : 1390
- LM : Normal
- LAD : multiple & moderate lesion
- LCX - OM : Diseased and multiple lesion
- RCA : Patent stent in proximal, moderate stenosis in distal after stent, significant stenosis in PLB
- CAG : 1392
- LM : 30% stenosis
- LAD : moderate proximal ISR
- LCX & OM : 90% stenosis
- RCA : Moderate ISR and severe distal stenosis

Course of Hospitalization

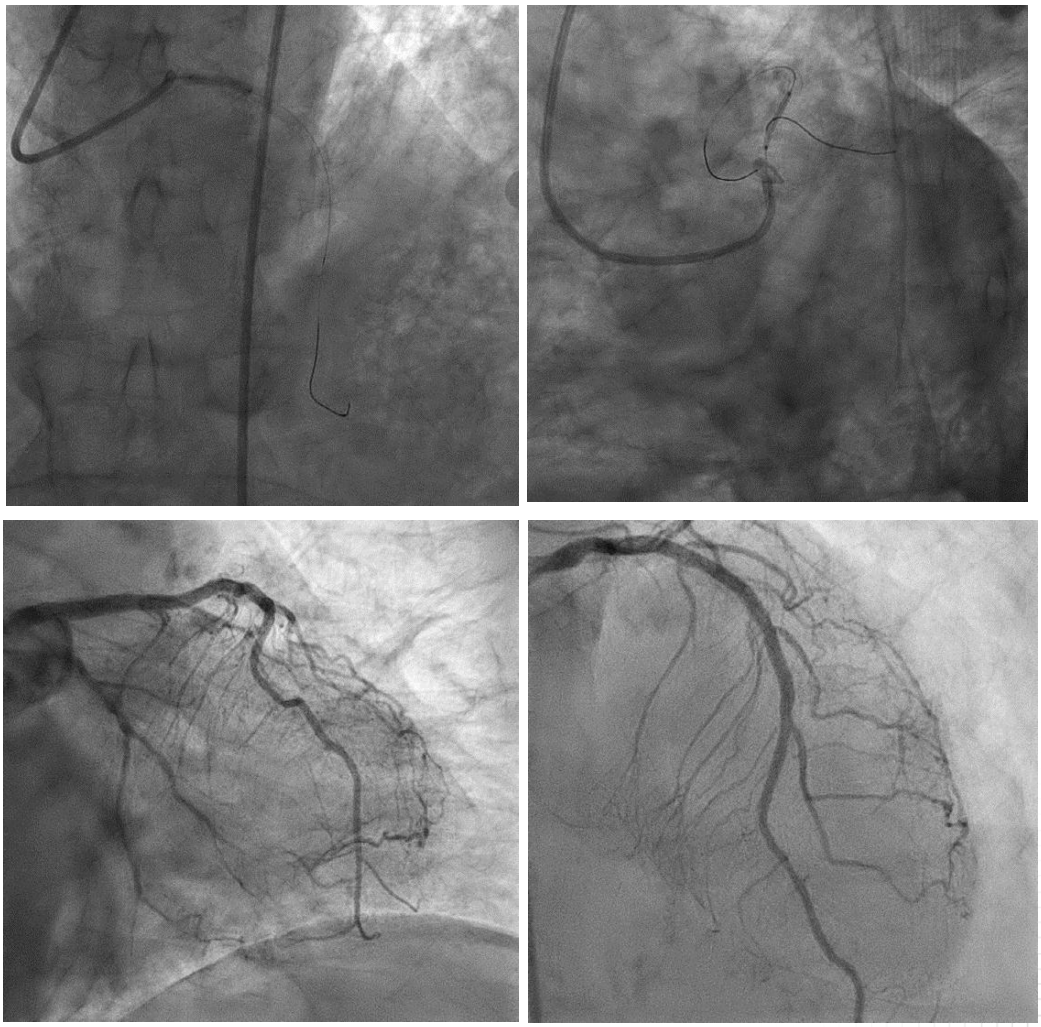
- The patient was admitted to the ward for CAG:
- On the second day, the chest pain and shortness of breath occurred.
- ECG showed dynamic ST-T change (LM pattern)



Coronary angiography was done, severe 3VD+LM was detected and the urgent CABG was planned. Urgent CABG consultation was done and the patient was transferred to the C-lab.



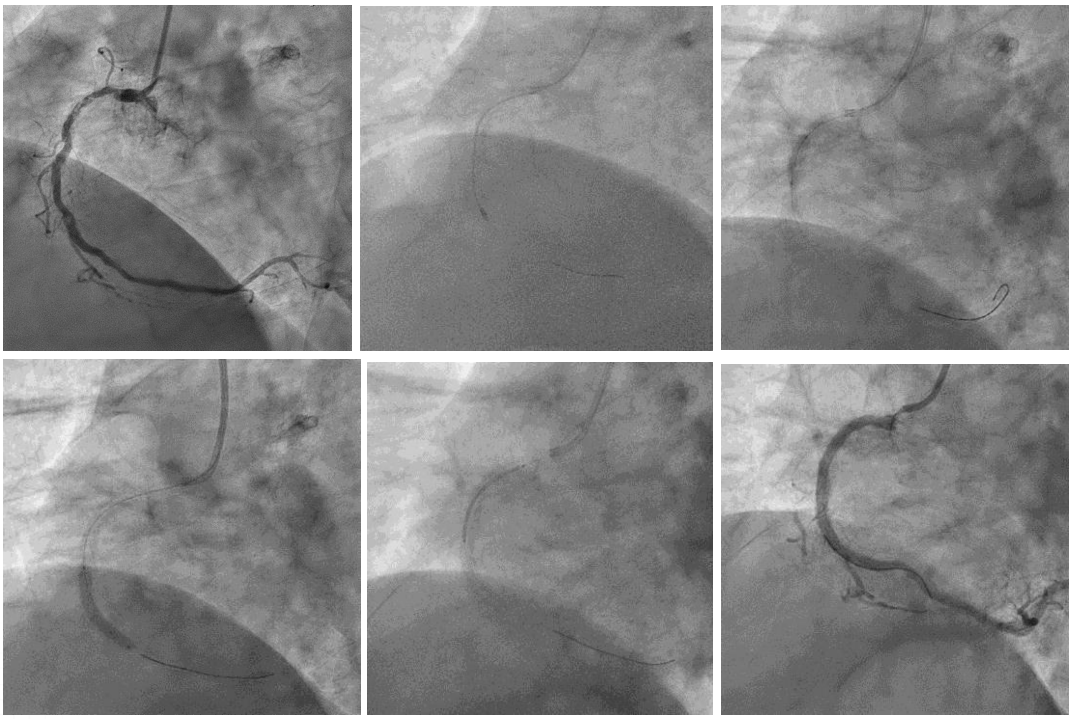
In post-Cath, the patient became unconsciousness and VF occurred, CPR was done and the patient transferred to the C-lab again. PCI on LM to LAD was done.



Follow-Up

- The patient was discharged in a good status
- 2 moths later, he came to the clinic complaining from aggravating low threshold angina
- PCI on RCA using Rotablator was planned

PCI on RCA using Rotablator



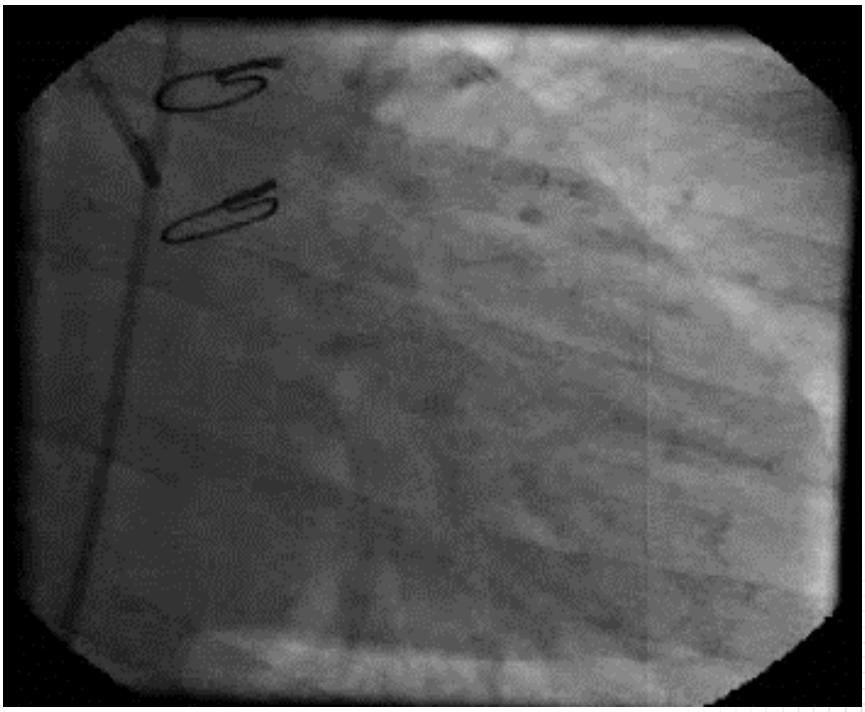
PCI on Post CABG-CTO lesion with poor retrograde filling

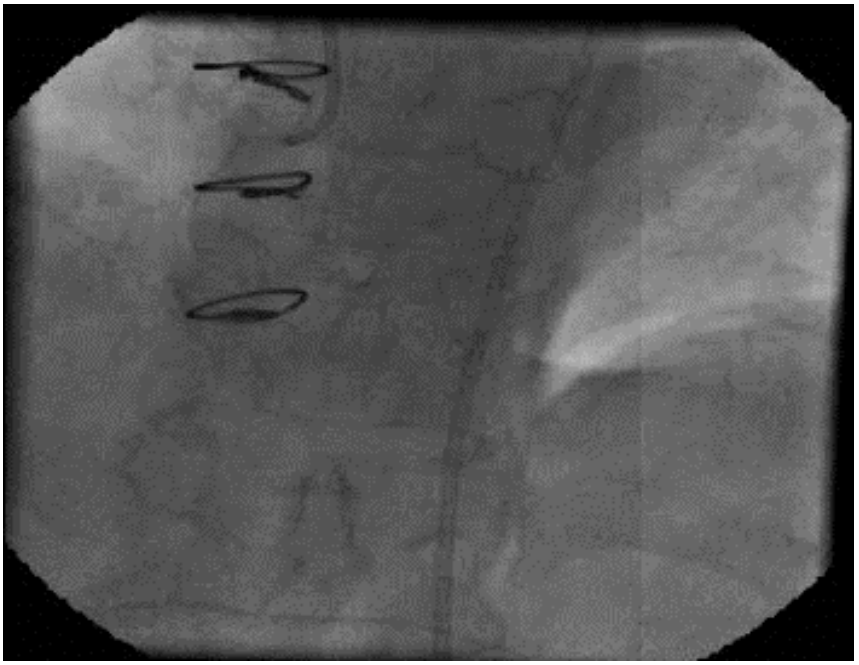
Leila Salehizadeh
Isfahan Medical University

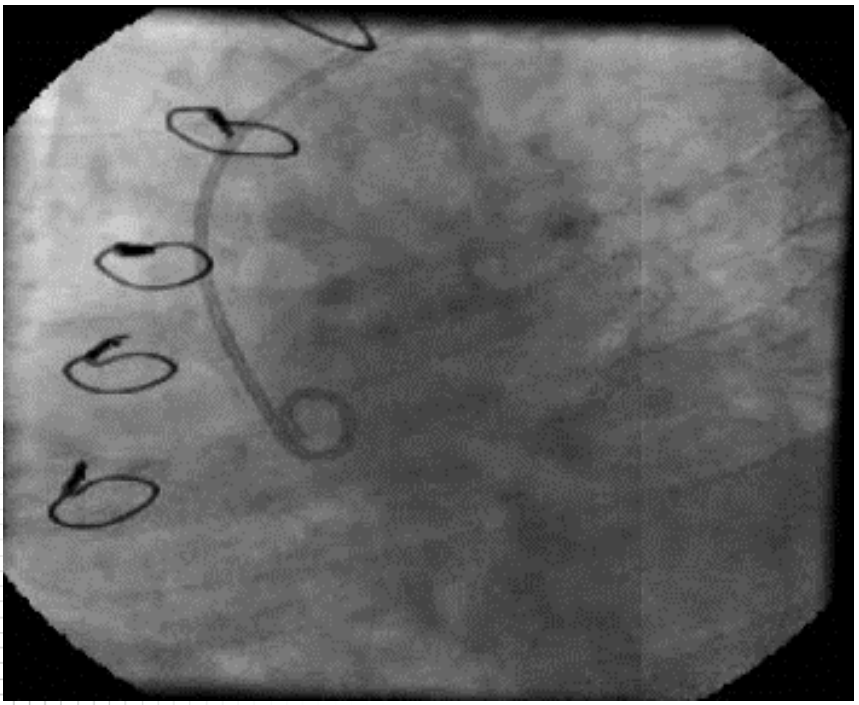
A 59 yrs old female with recurrent CP

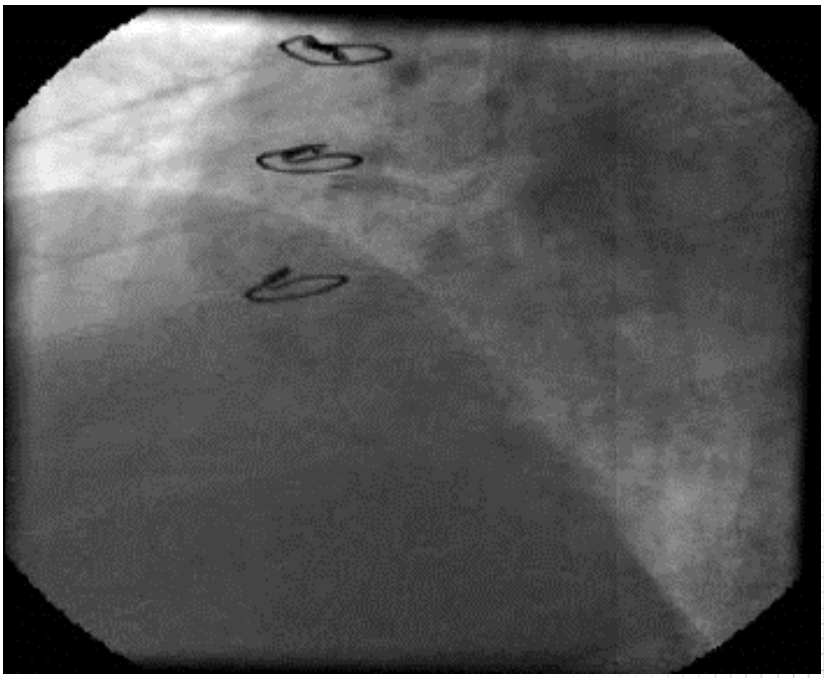
- CABG 6years ago
- HTN
- HLP
- DM
- NL Cr
- EKG NL
- ETT positive
- ECHO NL LVEF

Coronary angiography







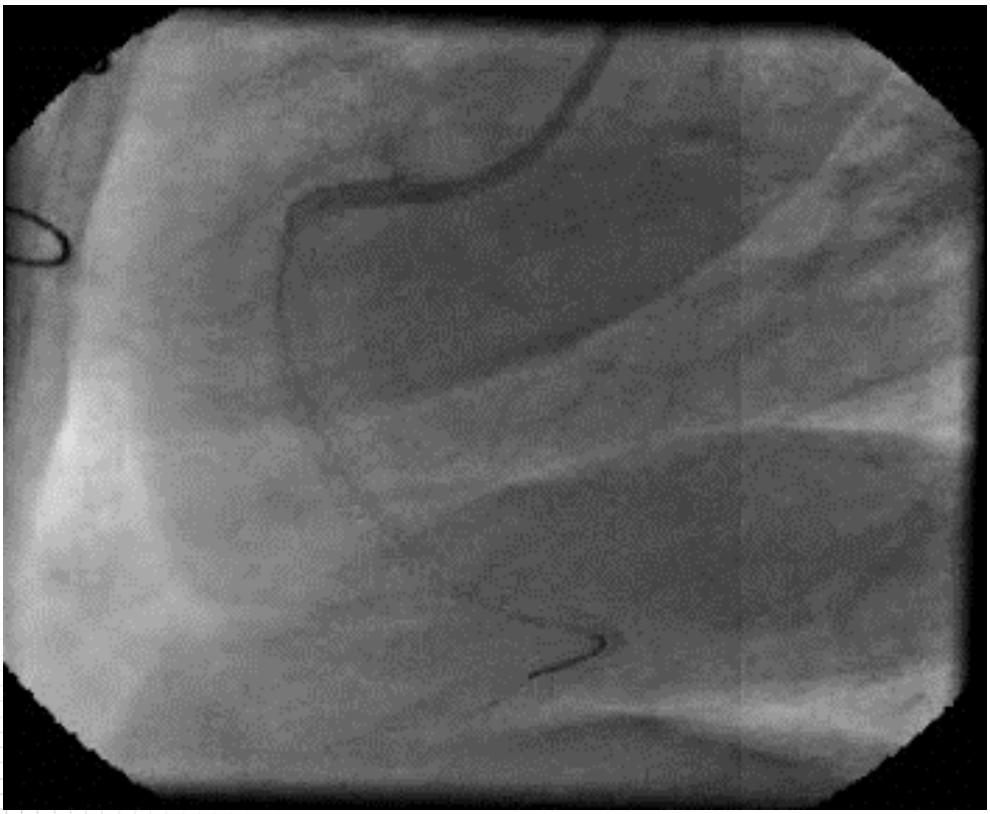


Native coronary pci or grafted SVG PCI

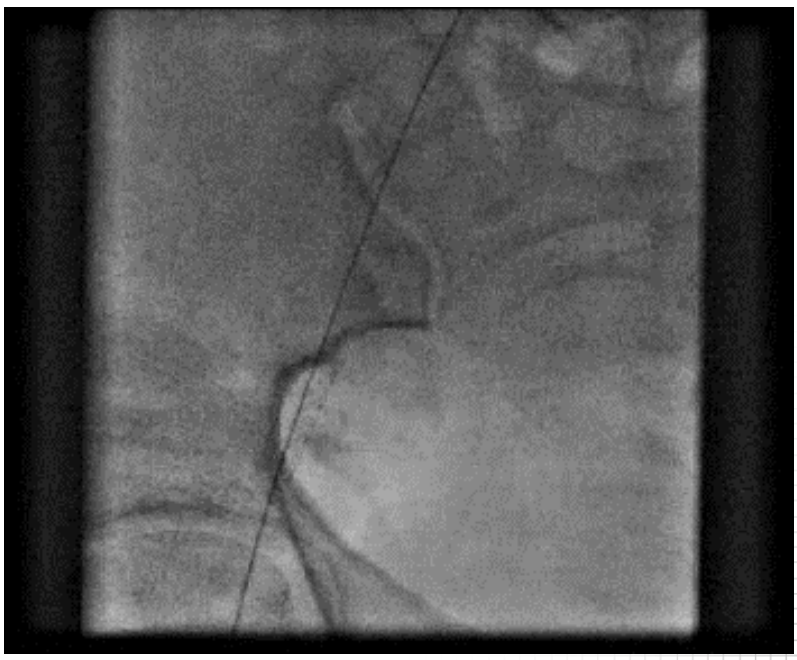
- More need to IABP in SVG PCI
- Longer fluoroscopy Time
- Less frequently achieved TIMI flow grade 3
- More likely to receive blood transfusion
- Higher rate of acute complication (no reflow)
- Subsequent instent restenosis

Most pci in prior CABG are done in native CAD although SVG pci becomes more prevalent with longer time interval from CABG Bypass graft pci is dependently associated with higher inhospital mortality and long term mortality.

Result: Native coronary pci preferred in post CABG pt except in presence of long ,tortuosity ,calcified native CAD or in presence of CTO .



After 20 minutes after PCI the pt developed hypotension and abdominal pain and became pale Echo : no PE

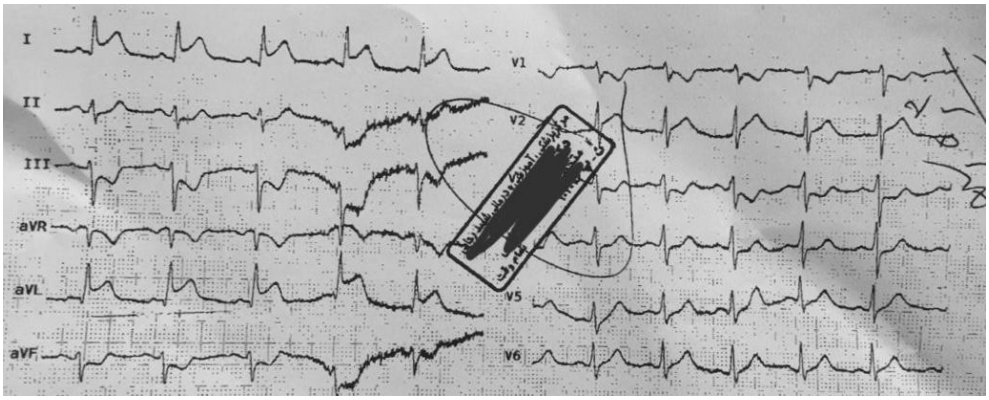


restoring of flow after primary pci in high clot burden vessels

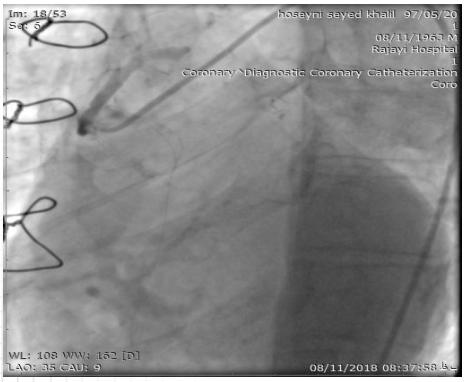
Fatemeh Sehati MD
Interventional Cardiologist

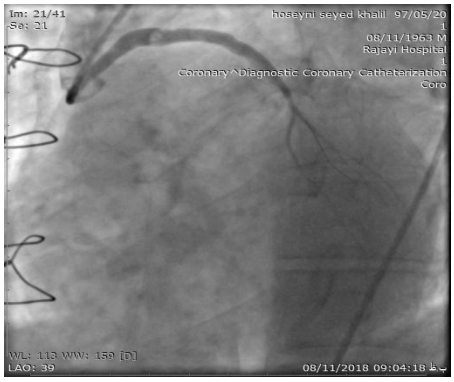
CASE:

53 y/o man with TCP from 2 hours ago
RF: HTN, C/S
PMH: CABG 15 y/ ago, PCI for SVG on PDA 2 y/ ago



CAG and PPCI result

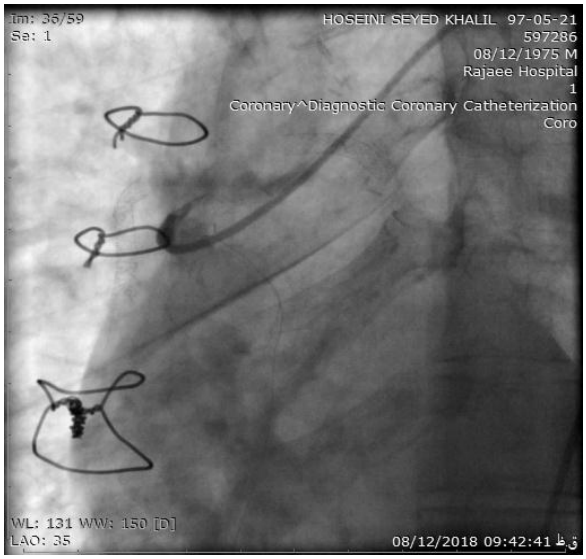




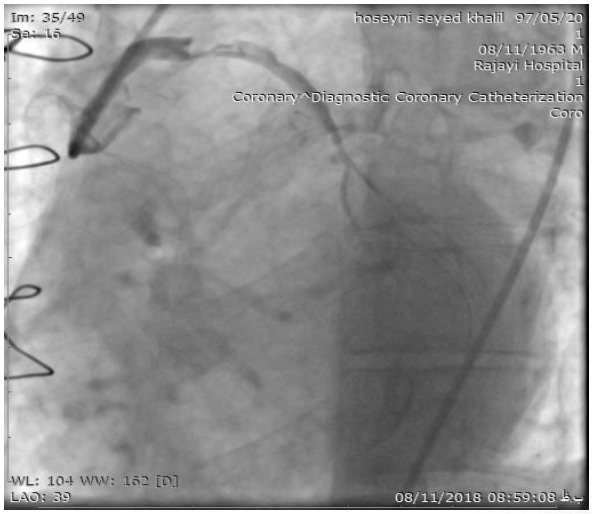
Next day:

Restart the CP with lateral STE again

CAG :



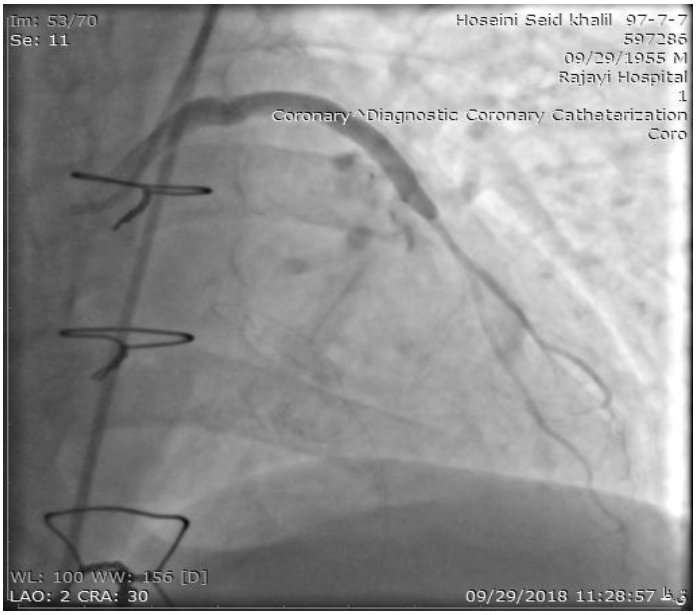
Total stent thrombosis



After thrombosuction and ballooning

High residual clot with TIMI II

Result after 1 month



anticoagulant therapy with rivaroxaban
2.5 mg/ BD
Good SVG flow without significant clot

Repeated stent migrations: A case report of left pulmonary artery stenting

Ahmad Vesal, farshad jafari
Rajaie Cardiovascular, Medical, and Research Center

Introduction

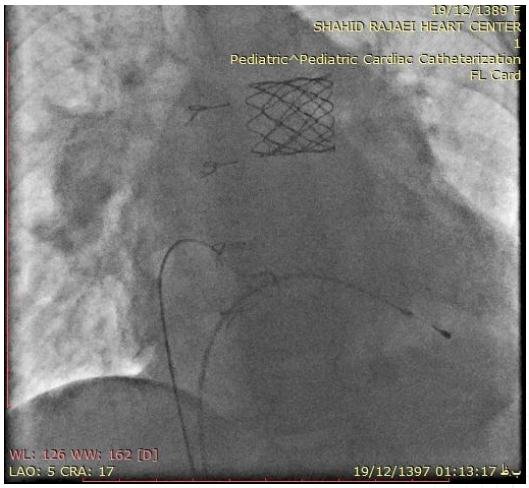
- Pulmonary artery branches stenosis is frequent after surgical repair of tetralogy of fallot.
- Stenting of pulmonary arteries can relieve the obstruction but require accurate pre-procedural evaluation to minimize the risk of stent migration or displacement.

history

- This study reports an 8 years old girl with a history of tetralogy of fallot that had a surgical repair in 2 years old.
- Echocardiography showed left pulmonary artery (LPA) stenosis, mild MR, moderate TR, and free PI.
- The patient admitted for stenting of LPA.

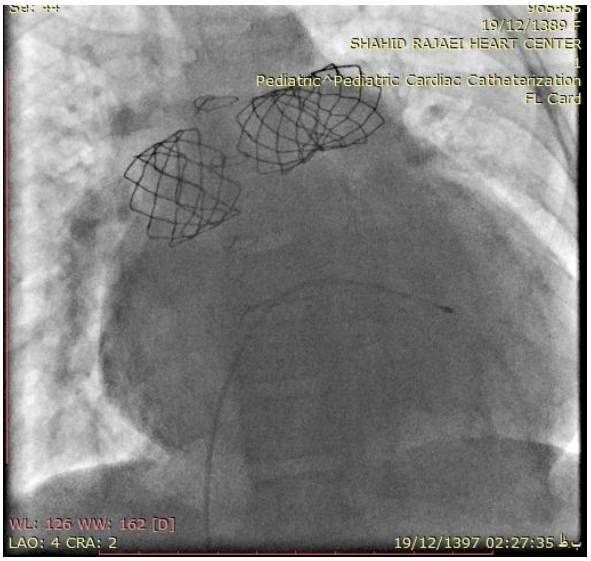
procedure

- At first, LPA stent was done with CP stent 28 mm and PTA balloon 14/30 mm, but stent migrated to the main pulmonary artery and then to right pulmonary artery(RPA).
- It was decided to deployment the stent in RPA with PTA balloon 20/40 mm, but the stent displaced again.
- At this time redilation of stent performed with PTA balloon 24/40 mm in RPA successfully.



Then percutaneous stent angioplasty of LPA was done with a longer stent (CP stent 45 mm) and BIB size 18/50 successfully.

❖ Pulmonary artery injection after the procedure showed good result without complication.



Conclusion: Injection into the proper view and correct measurement of vascular length is important in the success of stenting.

Pulmonary Artery Pseudo aneurysm Due to PDA associated with Infective Endocarditis (Case report and literature review)

Ali Akbar Zeinaloo
professor of Pediatric Interventional Cardiology ,
Tehran University of Medical Sciences

Infective endarteritis in the pulmonary artery is unusual. However, congenital heart disease such as patent ductus arteriosus (PDA) could be a predisposing factor of infective endarteritis and large pulmonary artery vegetation . Infective endarteritis was a fatal complication of PDA and the most common cause of death. However, the death rate of infective endarteritis associated with PDA has decreased due to early treatment such as surgical closure of PDA and use of antibiotics.

Pulmonary artery pseudoaneurysm (PAPA), an uncommon complication of pyogenic bacterial and fungal infections and related septic emboli, is associated with high mortality. The pulmonary artery (PA) lacks an adventitial wall; therefore, repeated endovascular seeding of the PA with septic emboli creates saccular dilations that are more likely to rupture than systemic arterial aneurysms.The most common clinical presentation of PAPA is massive hemoptysis and resultant worsening hypoxemia and Death. Computed tomography angiography is the preferred diagnostic modality for PAPA; typical imaging patterns include focal outpouchings of contrast adjacent to a branch of the PA following the same contrast density as the PA in all phases of the study. In mycotic PAPAs, multiple synchronous lesions are often seen in segmental and subsegmental PAs due to ongoing embolic phenomena.

These aneurysms frequently occur in patients with necrotizing infections of the lung or heart and those who are at high risk of septic embolism. PAPAs may be congenital or acquired, and the most common cause of acquired PAPA is infection

Organisms implicated in causing modern-day PAPA include pyogenic bacteria (e.g., *S. aureus*, *S. pyogenes*, *Klebsiella*, and *Actinomyces*), *Mycobacterium tuberculosis* (rare), and various fungi (*Mucor*, *Aspergillus*, and *Candida*) . Successive endovascular seeding of the PA lumen from multiple emboli or microemboli has been proposed as the pathogenesis of PAPAs in the infectious setting.

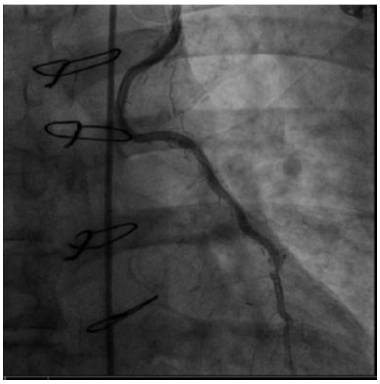
Surgical intervention should be considered at an early time for IE patients who have a vegetation in pulmonary artery and PDA. After the infection is under control, the earlier surgery may prevent severe and Fatal complications such as pulmonary artery dissection, rupture, massive hemoptysis and mycotic, septic multiple Emboli .In massive hemoptysis, endovascular treatment (e.g., coil embolization, stenting, or embolization of the feeding vessel) is preferred but in cases of PDA, Infective Endocarditis with Pulmonary artery mega aneurysm non-surgical interventional approach is not recommended.

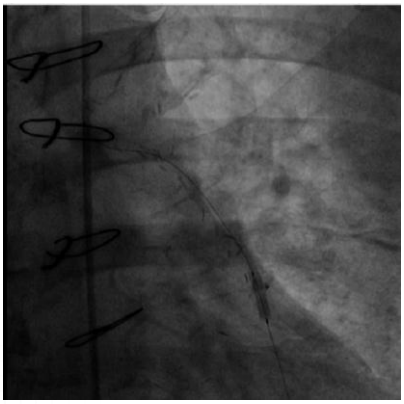
In conclusion, patients with relevant PDA are at risk developing IE and other serious complications. Pulmonary artery pseudoaneurysm (PAPA), an uncommon complication of pyogenic bacterial and fungal infections and related septic emboli, is associated with high mortality . It is recommend that a significant PDA should not only be closed for hemodynamic reasons, but also to prevent life-threatening endarteritis.

Case Presenntation

Dr. Mohammad Javad Zibaeenezhad

بیمار اقای ا.د ۶۴ ساله، با سابقه فشار خون، چربی خون و بدون دیابت مدت سه ماه پیش عمل CABG انجام داده است. وی از یک هفته قبل دچار تعریق در حین راه رفتن و دردهای قفسه صدری گردیده است. در انژیوگرافی انجام شده و در محل اناستوموز LIMA به LAD تنگی شدید مشاهده شد که ابتدا بالون انژیوپلاستی با بالن $\frac{25*12}{NC}$ انجام شد و سپس با استنت دارویی ۲.۷۵*۱۶ پوشش داده شد و نهایتا با بالون $\frac{3*12}{NC}$، Post dilatation انجام گردیده است.





Main Left PCI

Massoud Ghasemi M.D, IACC, FCAPSC, FACC
Interventional Cardiologist, AF Professor of Cardiology
Director of Iranian Society of Atherosclerosis

In this case presentation, a patient (56 years old woman) with the CV risk factors of HTN and DM, Past medical history of CVA, EF= 45%, septum and ant-wall mild hypokinesia, inferior wall hypokinesia, mild MR, Clinical presentation of acute inferior MI, Troponin : 9mic/dl underwent coronary angiography via right radial approach .
After successful primary PCI for RCA the patient was candidate for elective CABG because involvement of distal part of the left main and ostium of LAD and proximal part of LCX .Since the patient has a history of CVA, after the neurology consult, cardiovascular surgeon refused to operate the patient .The patient, herself, refused to have open heart surgery either. So she underwent PCI for left coronary system.
Through this case presentation, important topics including the pathway to plan the technical strategy, factors to be considered in selecting the stenting strategy and the provisional crossover of stenting techniques together with their comparison are explained. Finally the best stenting techniques for this complex case and the operation procedure is well illustrated through angiographic pictures and movies .

Abbreviations: CV: CardioVascular, HTN: Hypertension, DM: Diabetes Mellitus, MI: Myocardial Infarction, RCA: Right Coronary Artery, EF: Ejection Fraction, LAD: Left Anterior Descending Artery, CVA: Cardiovascular Stroke, CABG: Coronary Artery Bypass Surgery, LCX: Left Circumflex Artery, PCI: Primary Coronary Intervention, MR: Mitral Regurgitation

CAROTID ANGIPLASTY & HEMIPARESIA

DR. BIJAN ZAMANI
Intrventional Cardiologist
Ardabil Medical Faculty

65 Y/O LADY WITH HX. OF DM II & RECENT TIA
REFERED FOR CAROTID ANGIOGRAPHY

SEVERE LICA STENOSIS

PTA WITH FILTER WIRE MBOSHID

STENT : X.ACT BOSTON (CLOSED CELL)

LAST DAY IN THE MORNING PT. HAD CONFUSION & SWEATING WITH LT. SIDE FALCCID HEMIPLEGIA

BRAIN CT SCAN WAS NL

A - Minor complications

- Carotid artery spasm
- Sustained hypotension / bradycardia
- Carotid artery dissection
- Contrast encephalopathy (very rare)
- Minor embolic neurological events (TIAs)

B - Major complications

- Major embolic stroke
- Intracranial hemorrhage
- Hyperperfusion syndrome
- Carotid perforation (very rare)
- Acute stent thrombosis (very rare)
- Complications at the site of the vascular access

WHAT WAS WRONG ???

Blood glucose 52mg/dl

Hypoglycemia Signs & Symptoms