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THE EFFECT OF TISSUE INCUBATION WITH ISOPRENALINE ON RESPONSES OF INTACT AND DENUDED EPITHELIUM TRACHEA TO METHACHOLINEM. R. Aslani¹, M. H. Boskabady², A. Tabatabaei²¹Ardabil University of Medical Sciences, Department of Physiology, Ardabil, Iran²Mashhad University of Medical Sciences, Ghaem Medical Centre, Department of Physiology, Mashhad, Iran

There are reports regarding desensitization of β_2 receptors in asthmatic patients. Epithelial shedding of airway is a pathological feature of asthma. In the present study, the responses of tracheal chains of intact and denuded epithelium (groups 1 and 2, n=10 for each group) in the incubation (with 10 μ M isoprenaline, during 1h resting period) and non-incubation design to cumulative concentration of methacholine were measured, and EC50 was obtained. The same protocol was performed in groups 3 and 4 (n=5 for each group) which were similar to groups 1 and 2 except there was an additional 30 min rest in incubated design before pharmacological measurements. The response of denuded epithelium trachea to methacholine (3.93 \pm 0.62) was significantly higher than that of intact epithelium (9.36 \pm 2.60, P<0.05) in non-incubated condition. Incubation to isoprenaline caused significant reduction in tracheal response to methacholine in both the denuded (8.75 \pm 1.33) and intact epithelium (18.20 \pm 4.03, P<0.005 for both cases). The response of denuded epithelium trachea to methacholine in incubated condition was also significantly higher than that of intact epithelium (P<0.05). Furthermore, the reduction in tracheal responsiveness to methacholine due to incubation in epithelium denuded group was nonsignificantly greater than that of intact epithelium group. There was no any significant difference between groups 3 and 4 with those of groups 1 and 2 in both incubated and non incubated conditions. The maximum contractility response to methacholine was not significantly different between tracheal chains with denuded and intact epithelium and did not change due to incubation with isoprenaline. The results of this study indicate reduction of tracheal response to methacholine due to incubation of tissues with isoprenaline, which was relatively more pronounced in epithelium denuded trachea.

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TUBERCULOSIS IN FEDERATION BOSNIA AND HERZEGOVINA DURING 1998-2004

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Bosnia and Herzegovina (B&H) belongs countries with high TB incidence, as soon as a bigger part of it, Federation B&H (FB&H). DOTS strategy was introduced in B&H during the War in 1994 with gradually implementation in all parts of country. TB incidence rate was decreasing from 100/100.000 in 1988 till under 70/100.000 in 2000 and later. The Goal: To analyse the TB situation in FB&H and effectiveness of DOTS strategy in the whole country in period 1998-2004. Material and method: We retrospectively analyzed computerized data collection of all reported TB cases in FB&H during period 1998-2004 according to data set recommended by WHO and EuroTB with some additional data important for internal analyse. **Results:** In 1998. in B&H was reported 2, 711 TB all sites cases with incidence rate 74/100, 000. The number of all TB cases in 2004 was 2, 382 with incidence rate 59, 4/100, 000. In the same years number of TB cases in FB&H was 2070 (76, 35%) in 1998, and 1747 (73, 74%) in 2004. Gender structure of reported TB cases in this period was 55, 5-57.8% male and 42, 2-44, 5% female. Age groups: the biggest age group in this period was >64 with 555 (26, 81%) in 1998 with similar percents in all years, and age group 25-34 (16, 08%) with gradually shift in elder age groups in the last years of this period. Younger age groups 0-4 were presented with a few TB cases (5-16 or 0, 28-0, 91%) and 5-14 years (29-43 or 1, 63-2, 08%). We analyzed TB in all 10 Units of FB&H and the biggest % of TB cases was in north-east part (Tuzla Canton) – 30.4-34.00%, central part

(Zenica-Doboj Canton) – 14, 9-24, 22%, and north-west part (Una-Sana Canton) – 14, 32-19.9% of all TB cases in FB&H. Case categories: new TB cases 87-89.4% and relapses 10, 5-13%. Smear positive TB cases were 454-581 of all TB cases, and culture positive were till 70, 00%. Pulmonary TB cases were presented with 87, 4-91, 81%, and extrapulmonary 8, 19-13, 6%. Treatment success for all new smear positive TB cases was 94, 8, and 78.6-89% for relapses. Conclusion: Implementation of DOTS strategy in National TB Programm in FB&H was slightly increased notification rate till 1999, and slightly decreased incidence rate till 59, 3/100, 000 in 2004. with shift of TB cases in elder age groups. B&H was categorized in category 4 by degree of DOTS implementation (WHO Report 2003, p 11).

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REVELATION OF RIGHT VENTRICULAR DIASTOLIC RESERVE IN HYPOXIC COR PULMONALE

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Aim was to study right ventricular (RV) diastolic reserve in COPD patients complicated with hypoxic pulmonary hypertension (PH) and cor pulmonale (CP) at rest and inhaling hypoxic gas mixture. Systolic and diastolic RV functions and pulmonary hemodynamics were assessed using Doppler-echocardiography in 45 COPD patients with PH and CP at remission. Control group consisted of 15 healthy age-matched men. RV ejection fraction was determined by Gibson (1985) and Levine (1984). COPD patients demonstrated two types of RV diastolic dysfunctions: hypertrophic and pseudonormal. Control group showed no considerable changes of RV diastolic function in response to hypoxic test. COPD patients at 1st group having only PH and COPD patients having PH and CP with hypertrophic RV diastolic dysfunction (2A) preserved their diastolic reserve in response to stressing test. COPD patients with PH, CP and pseudonormal RV diastolic dysfunction had restricted diastolic reserve which was revealed using hypoxic test. Legend: B- Baseline, HT – hypoxic test, P – compared with baseline data, E/A – early tricuspid velocity to late peak velocity ratio, Ei/Ai- integrated early tricuspid velocity to late peak velocity ratio, FAF %- fraction of atrial filling, IVRT –isovolumic relaxation time, RT- retardation time.

Table. Influence of acute hypoxia on right ventricular diastolic function in healthy persons and COPD patients

Indices		Control (n=16)	1st group (n=21)	2nd group	
				Subgroup 2H (n=15)	Subgroup 2P (n=9)
E/A	B	1, 45 \pm 0, 04	0, 92 \pm 0, 03	0, 72 \pm 0, 03	1, 5 \pm 0, 04
	HT	1, 12 \pm 0, 03	0, 84 \pm 0, 03	0, 62 \pm 0, 02	2, 15 \pm 0, 05
	p<	0, 001	NS	0, 011	0, 001
Ei/Ai	B	3, 25 \pm 0, 11	1, 95 \pm 0, 08	1, 45 \pm 0, 05	3, 51 \pm 0, 08
	HT	2, 37 \pm 0, 09	1, 82 \pm 0, 08	1, 23 \pm 0, 05	4, 82 \pm 0, 16
	p<	0, 001	NS	0, 005	0, 001
FAF %	B	24, 0 \pm 0, 7	34, 5 \pm 1, 0	41, 0 \pm 0, 9	22, 3 \pm 0, 4
	HT	30, 0 \pm 0, 8	36, 0 \pm 1, 1	45, 2 \pm 1, 1	17, 3 \pm 0, 5
	p<	0, 001	NS	0, 007	0, 001
IVRT, ms	B	56, 4 \pm 1, 5	93, 5 \pm 1, 0	102, 0 \pm 1, 1	58, 6 \pm 1, 1
	HT	81, 2 \pm 2, 3	98, 0 \pm 0, 9	106, 4 \pm 1, 1	41, 0 \pm 1, 2
	p<	0, 001	0, 002	0, 009	0, 001
RT, ms	B	180, 3 \pm 4, 3	218, 1 \pm 1, 6	224, 0 \pm 1, 5	179, 2 \pm 2, 4
	HT	184, 6 \pm 4, 4	224, 1 \pm 1, 1	231, 1 \pm 1, 4	147, 3 \pm 1, 1
	p<	NS	0, 004	0, 002	0, 001