

The study of the feasibility of a depression screening program in cardiac surgery patients

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Abstract

Depression is common in patients with ischaemic heart disease and preoperative depression is a risk factor following coronary artery bypass grafting. Our aim was to assess the feasibility and results of a depression screening program in cardiac surgery patients. 48 two-item Patient Health Questionnaire (PHQ-2), a depression screening instrument, patients with a positive PHQ-2 screen would then undergo a nine-item Patient Health Questionnaire (PHQ-9). The PHQ-9 has been validated in patients with heart disease. Baseline characteristics, medical history, and medications were collected from patient charts, and entered into a study database together with the results from the PHQ-9 questionnaires. The response-rate in patients scheduled for elective surgery was 64%, and 15% in urgent patients. Fifteen per cent had a PHQ-9 score 10 suggestive of major depression. Reporting a PHQ-9 score 10 was twice as common in women as in men (23% vs 12%). Systematic depression screening using PHQ-9 in cardiac surgery patients was feasible and not very resource-intensive. The project showed a satisfactory response-rate in elective patients, but adjustments to increase the response-rate in urgent patients are needed. Future studies should investigate if and how patients with symptoms of depression would benefit from depression management.

Keywords: depression, cardiac surgery, patients

Introduction

Depression and heart disease are common and serious conditions. The lifetime incidence of depression in the US is predicted to be 12% in men and 20% in women (Kessler et al, 2003). In patients with cardiac disease approximately 15–20% meet the criteria for major depressive disorder, including patients with congestive heart failure (Rutledge, 2006) or acute coronary syndrome (Meijer, 2013). Preoperative depression has shown to be a significant risk factor for mortality and rehospitalisations following coronary artery bypass grafting (Stenman, 2013).

This association between depression and worse prognosis after cardiac surgery indicates that depression may occur before, and continue after, an acute cardiac event. Depression can take different expressions in men and women (Martin, 2013). If only traditional depression symptoms are taken into account, depression could be underdiagnosed in men (Martin, 2013).

The American Heart Association (AHA) and the US Preventive Services Task Force recommend depression screening in all patients with heart disease (Lichtman, 2008). It has not been shown that screening leads to improved outcomes in cardiovascular populations, but it is important to assess depression in patients with heart disease because depression is associated with poorer health-related quality of life, and cardiac complaints (de Jonge, 2006). To offer treatment and support for depressive symptoms may reduce mortality and increase quality of life (Smolderen, 2017).

Tables and Figures

During the study period, 2512 patients underwent cardiac surgery; 1133 (45%) completed PHQ-9 and were included in the study. Among patients scheduled for elective surgery 990/1544 (64%) completed the PHQ-9 questionnaire, and among urgent patients the response rate was 143/968 (15%). Fifteen per cent (166/1133) had a PHQ-9 score 10 suggestive of major depression. Reporting a PHQ-9 score 10 was twice as common in women as in men 23% vs 12% (Table 1).

Table 1 Baseline characteristics in screening negative and screening positive patients, according to sex.

Variable	Men	Women	p	Men	Women	p
Number of patients (%)	736 (65%)	232 (20%)		97 (9%)	69 (6%)	
Age, years	65.4 (11.1)	66.6 (12.4)	0.142	59.8 (12.7)	64.5 (11.7)	0.018
Living alone	163 (23%)	93 (42%)	<0.001	22 (24%)	22 (34%)	0.166
Children	501 (72%)	163 (73%)	0.607	71 (79%)	51 (81%)	0.755
Diabetes	118 (16%)	25 (11%)	0.058	18 (20%)	12 (18%)	0.862
History of stroke	19 (3%)	5 (2%)	0.717	3 (3%)	0 (0%)	0.136
Current use of antidepressants	6 (1%)	2 (1%)	0.951	3 (4%)	6 (10%)	0.147
Alcohol consumption			0.014			0.048
Never	46 (6%)	24 (11%)		16 (18%)	18 (28%)	
Moderate	637 (90%)	196 (88%)		62 (69%)	45 (69%)	
High	26 (4%)	2 (1%)		12 (13%)	2 (3%)	
Smoking	42 (6%)	16 (7%)	0.498	12 (13%)	11 (17%)	0.498
Type of surgery			<0.001			0.264
Isolated CABG	227 (31%)	26 (11%)		32 (33%)	17 (25%)	
Isolated valve	304 (41%)	129 (56%)		51 (53%)	36 (52%)	
Other	205 (28%)	76 (33%)		14 (14%)	16 (23%)	
Urgent procedure	93 (13%)	24 (10%)	0.361	12 (12%)	10 (14%)	0.691

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