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DEPRESSIVE SYMPTOMS IN PATIENTSWITH CORONARY DISEASE

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Key Words: **CVD** – Cardio Vascular Disease. **ACS** – Acute Coro-nary Syndrome. **BDI** - Beck Depression Inventory. **BMI** –Body Mass Index. **EF** – Ejection Fraction. **ESC** – European Society of Cardiology. **SD** – Standard Deviation, **LV** – Left Ventricle, **HLS**- Hospital length of stay, **HRQol** – Health Related Quality of Life.

Background:

Many studies have shown that depression has negative impact in patients with coronary disease. Further more, recentevidence suggests that depression predicts the worsehealth-related quality of life (HRQol) independently of theseverity of coronary heart disease (1). In patients with acutecoronary syndrome (either myocardial infarction unstable angina) subsyndromal levels of depressive symptoms are associated with coronary event recurrence and morbidity(2,3,4). In other words,patients with anxiety or depression are more compromised independently of their clinical characteristics and risk factors(5). Studies recommend that early detection and treatment of depression in patients with acutecoronary syndrome is important(6).

The aim of our study was to identify factors associated with depressive symptoms in patients with acute coronary events.

Methods

Depression screening was performed in patients with coronary diseases in Chapidze Center (Tbilisi, Georgia). Thetotal number of participants was 123.

Coronarography was performed in all patients. Coronary obstruction was definedas 50% and more stenosis in the left main coronary artery or70% and more stenosis in major coronary arteries (7). Patients' data were collected from hospital recordings. All subjects signe daninformed consentat at the admission to the hospital.

Depression screening was approved by the ethical committee of theTbilisi State Medical University.

History of arterial hypertension was categorized into twogroups, negative/ positive.

Body mass index (BMI) was calculated and then categorizedin to BMId"25and>25 respectively.

Tobacco consumption: All participants were classifiedas non-smokers and current smokers.

Depression was assessed by the Beck Depression Inventory(BDI).

Score 16 was used as a cut-off value as scoreabove it indicate a moderate level of depressive symptoms. Systolic dysfunction was assessed by echocardiographyat admission. The variable for systolic dysfunction was provided by two categories, ejectionfraction 40% and 40%. Our decision was sasedon theESC guidelines (8).

Statistical analyses

Descriptive statistical tests were used for the calculationof frequencies, means and standard deviations. Chi-squaretest was applied for categorical variables in order to establish difference between groups. TheIndependentT-testwasusedto compare means for numerical variables «age» and«hospital duration».

The value was set at 0.05. Al l statistical tests were performed using SPSS 16.

Results Out of 123 patients, 78.9 % were men and 21.2% wom-en. The mean age for both genders was 58,5 (10,63) years. Unstable angina was diagnosed in 53.7% of patients and acutemyocardial infarction in 36.6% respectively. Most of theparticipants were non-smokers and obese (74%) with thehistory of arterial hypertension (87.7%). 78.0% of participant shadobstructive CAD.BDIscore>6wasrevealedin26.8%of cases. Positive history of diabetes was seen in 26.8% of participants. Mean hospital stay (HLS) in dayswas 3.2 (2.1).**Table 1. summarizes general characteristics of the patients**

N123	**All**
Age (years), Mean and SD	58,5 (10.6)
Sex %	
Men	78.9
Women	21.1
Body mass index %	
>25	74.0
<25	21.1
Nor measured	4.9
Smoking status%	
Smokers	39.0
Non-smokers	61.0
History of arterial hypertension %	
Yes	87.8
No	12.2
Depression score %	
>16	26.8
<16	73.2
Hospital duration in days (mean SD)	3.2 (2.1)
Coronary artery disease %	
Unstable angina	53.7
Myocardial infarction	36.6
Stable angina	8.9
Diabetes	
Yes	26.8
No	71.5
Not specified	1.6
Obstructive CAD %	
Yes	78.0
No	22.0
Ejection fraction	

<40%	9.8
>40%	73.2
Not measured	17.1

Results expressed by mean and standard deviation orpercentage Women, elderly patients and those with reduced ejection fraction had a higher depression score. No relationship was established between depressive symptoms and coronary risk factors (obesity,hypertension,diabetes). However,we found,that non-smokers were mere depressed than smokers(table2).

Table 2.

N 123	Depression scores >16	Depression scores <16	p value
Sex %			
Men	19.6	80.4	0.000
Women	53.8	46.2	
Age group			
>65	45.7	54.3	0.003
<65	19.3	80.7	
Systolic dysfunction			
Yes	58.3	41.7	0.011
No	23.3	76.7	
Body mass index			
>25	23.1	76.9	0.052
<25	43.2	57.7	
Arterial hypertension			
Yes	29.6	70.4	0.075
No	7.1	92.9	
Diabetes			
Yes 3.3	66.7	0.293	
No	23.9	76.1	
Smoking			
Yes	12.5	87.5	0.004
No	36.0	64.0	

Discussion In the current study , we tried to outline factors associat-ed with depressive symptoms. We found that women, elderly patients and those with reducede jectionfraction were more depressed with theBDI-score>16. This could be explained by the fact that patients with decreased ejection fractions frequently report fatigue and disability, which may contributet odepressive mood.

The same trend was revealed in other studies. Accordingto the MIND-IT study, which assessed the severity of depressive symptoms in MI patients during hospitalization,after adjusting with classic risk factors and demographic data,the BDI score was3-time shigher inpatients with red ucedejectionfraction (10).The high erprevalence of depressive symptomsin women compared to men was shown in the PREMIER study(9).

Since depressive symptoms predict worse outcomes inpatients with acute coronary events (9),

early identification of depression could help health care providers to improve management of patients with acute coronary events.

Conclusion

Early detection of depression is very important in pa-tients with acute coronary events. Women, elderly patientsand patients with systolic dysfunction have a greater number of depressive symptoms.

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