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ASSOCIATION OF ANXIETY AND DEPRESSION WITH THE CLINICAL SEVERITY OF UNSTABLE ANGINA

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Abstract: This study assessed the relationship between anxiety, depression, age, and perceived severity of unstable angina in hospitalized patients. Fifty-five patients with unstable angina were evaluated using the Seattle Angina Questionnaire, SF-36, and Zung anxiety and depression scales. Anxiety was detected in 40% of participants, while subclinical depression occurred in 12.7%. Angina severity correlated strongly with anxiety ($r=0.66$) and depression ($r=0.64$), and moderately with age ($r=0.62$). These findings indicate that emotional distress may substantially influence symptom perception and should be considered during comprehensive assessment of unstable angina during care.

Keywords: unstable angina; anxiety; depression; Seattle Angina Questionnaire; ischemic heart disease.

СВЯЗЬ ТРЕВОГИ И ДЕПРЕССИИ С ВЫРАЖЕННОСТЬЮ НЕСТАБИЛЬНОЙ СТЕНОКАРДИИ

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Аннотация: В исследовании изучена взаимосвязь тревоги, депрессии, возраста и субъективной выраженности нестабильной стенокардии у госпитализированных пациентов. Обследовано 55 больных с нестабильной стенокардией с использованием Сиэтловского опросника стенокардии, опросника SF-36 и шкал тревоги и депрессии Цунга. Тревожное состояние выявлено у 40% обследованных, субклиническая депрессия — у 12,7%. Выраженность стенокардии имела сильную корреляцию с тревогой ($r=0,66$) и депрессией ($r=0,64$), а также умеренную связь с возрастом ($r=0,62$).

Полученные результаты показывают значимое влияние эмоционального состояния на восприятие симптомов у пациентов с нестабильной стенокардией.

Ключевые слова: нестабильная стенокардия; тревога; депрессия; Сизтловский опросник стенокардии; ишемическая болезнь сердца.

Introduction: Ischemic heart disease remains a major cause of morbidity and mortality; unstable angina requires rapid recognition because it may precede myocardial infarction or sudden cardiac death. Clinical assessment of unstable angina relies substantially on the patient's description of chest discomfort, making subjective symptom perception an important component. Psychological factors may modify this perception and contribute to differences in reported symptom severity among patients with comparable cardiovascular conditions. Anxiety and depression are particularly relevant because emotional distress can increase attention to bodily sensations, alter pain interpretation, and impair adaptation to chronic illness. Previous clinical observations indicate that anginal pain may occur more frequently during stress testing in patients with anxiety or depressive symptoms. Therefore, emotional assessment may provide additional information when evaluating unstable angina. The study examined the relationship between angina severity and anxiety, depression, age, and selected somatic variables. The Seattle Angina Questionnaire was used to quantify disease-related manifestations, while the SF-36 questionnaire provided an additional assessment of pain intensity. Zung scales were applied to identify anxiety and depressive symptoms. Additional psychological and clinical parameters were also analyzed. Determining the relative contribution of emotional and somatic factors may help improve interpretation of symptoms and support a more individualized approach to diagnosis, treatment, and follow-up of patients with unstable angina.

Aim of the study: To determine the relationship between anxiety, depression, age, and the perceived severity of unstable angina and to identify the psychological and somatic factors most strongly associated with anginal manifestations.

Materials and methods. The study included 55 patients admitted to the cardiology department of City Hospital No. 3 in Irkutsk with a diagnosis of unstable angina. Mean age was 60 ± 11.4 years; women accounted for 36.4% and men for 63.6% of participants. Angina severity was assessed using the Seattle Angina Questionnaire, which evaluates physical limitation, angina stability, angina frequency, treatment satisfaction, and disease perception. Health-related pain was additionally evaluated using the BP subscale of the SF-36 questionnaire. Psychological status was examined with the Zung anxiety and depression scales. The Hamilton Anxiety Scale, Montgomery–Åsberg Depression Rating Scale, Toronto Alexithymia Scale, and AUDIT were also used to characterize emotional, personality, and alcohol-related factors. Laboratory assessment included blood glucose, total cholesterol, troponin T, and estimated glomerular filtration rate calculated by the MDRD formula. A twelve-lead electrocardiogram was recorded. Correlation analysis was performed to determine associations between angina severity and demographic, psychological, and somatic variables. Group comparisons evaluated differences according to anxiety, depression, and sex. Multivariable analysis assessed the independent contribution of investigated factors to angina severity. Statistical significance was determined according to reported p values, with $p < 0.05$ considered significant. All assessments were performed in hospital. The analysis focused on identifying whether psychological characteristics retained significant relationships with angina severity after demographic and somatic variables were considered. The results were interpreted as associations rather than proof of causality.

Results. Anxiety was identified in 40% of the 55 patients, including moderate anxiety in 34.5% and pronounced anxiety in 5.5%. Subclinical depression was detected in 12.7% of participants. The Seattle Angina Questionnaire score showed a strong positive correlation with anxiety ($r=0.66$; $p<0.000001$) and depression ($r=0.64$; $p<0.000001$). Pain intensity on the SF-36 BP subscale correlated inversely with anxiety ($r=-0.37$; $p=0.006$) and depression ($r=-0.48$; $p=0.00017$). Patients with anxiety had higher SAQ scores than those without anxiety, 74.5 versus 57.8

points ($p=0.000002$). Patients with depression also demonstrated higher SAQ values, 74.9 versus 62.9 points ($p=0.02$). Alexithymia was greater among anxious patients, with scores of 78 versus 68 points ($p=0.01$). Age was significantly associated with SAQ severity ($r=0.62$; $p=0.000001$) and inversely related to SF-36 BP scores ($r=-0.44$; $p=0.00097$). Women had higher anxiety and depression scores than men, 38.7 versus 31.6 ($p=0.0045$) and 44.9 versus 36.9 ($p=0.0007$), respectively. Angina severity also correlated with glomerular filtration rate ($r=-0.48$; $p=0.0003$), whereas glucose, cholesterol, troponin T, and electrocardiographic changes showed no significant associations. Multivariable analysis identified anxiety ($\beta=0.398$), age ($\beta=0.369$), and depression ($\beta=0.278$) as significant contributors to angina severity. The findings suggest that emotional status was more closely related to perceived angina severity than several routinely measured biochemical and electrocardiographic parameters in this sample.

Conclusions: Among hospitalized patients with unstable angina, perceived disease severity was strongly associated with anxiety and depression and was also related to age. Anxiety affected 40% of participants, while subclinical depression was identified in 12.7%. Patients with anxiety or depression demonstrated higher SAQ scores, indicating greater perceived anginal burden. Women had higher emotional distress scores, and age was independently associated with symptom severity. Glomerular filtration rate showed an additional association, whereas glucose, cholesterol, troponin T, and electrocardiographic changes were not significant predictors. These findings support psychological assessment alongside cardiovascular evaluation for individualized management follow-up. Early recognition of distress may improve care.

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