

Painless Myocardial Ischemia

Bakhramova Azima Abbasovna

Assistant of department of internal medicine in family medicine of the Bukhara State Medical Institute

Abstract: Currently, numerous clinical studies by domestic and foreign cardiologists have clearly shown that the presence of silent myocardial ischemia (SMI) significantly worsens the prognosis of patients with coronary heart disease (CHD). Patients with SMI represent a high-risk group in terms of the development of cardiovascular complications compared to patients who do not have episodes of ischemia. A.I. Martynov et al. (1995) note that the risk of sudden death in patients with SMI increases by 5-6 times, the development of myocardial infarction and chronic heart failure - by 1.5 times, more often there is a need for revascularization and / or repeated surgical intervention. A number of researchers consider "silent" ischemia a poor prognostic sign, since its presence is associated with an increased risk of unstable angina, myocardial infarction and sudden death. Since "silent" ischemia does not manifest itself as any discomfort in the heart region, its significance is often underestimated.

Keywords: silent myocardial ischemia, Holter monitoring, treadmill test, angina pectoris, dysfunction of endothelium.

Silent myocardial ischemia is a serious progressive disease which deserves continuous surveillance. It is characterized by painless ST-segment depression based on coronary artery disease. The mechanisms responsible for producing this condition do not differ from stable angina pectoris. — The prognostic implications of silent ischemia are not yet completely clarified. However it could be argued that patients die — whether or not angina pectoris is present - because they develop myocardial infarction or ischemic ventricular arrhythmias. Complex ventricular arrhythmias seem to occur not at a higher rate than in patients with angina pectoris. On the other hand there is no doubt about a present arrhythmogenic potential of a silent myocardial ischemia, but there is so far no clinical evidence that the prognostic significance is different to symptomatic myocardial ischemia. — In order to reduce or eliminate ischemic episodes intensive combination medical therapy should be used. If symptoms recur or ischemic changes are persistent, consideration should be given to revascularisation. Nevertheless, the optimal way of treating silent ischemia is still to be defined.

The purpose of the study: Silent myocardial ischemia is the presence of objective data of myocardial ischemia in the absence of angina pectoris or angina equivalents.

Materials and methods Silent myocardial ischemia (SMI) is observed in individuals with various clinical forms of coronary heart disease and even without it. If SMI is detected in individuals without previously diagnosed coronary pathology, it is classified as a subclinical form of coronary heart disease. The results of some modern studies have shown that SMI does not differ significantly in clinical and prognostic significance from typical painful myocardial ischemia. The results of most studies in recent years have shown that "silent" episodes of myocardial ischemia in patients with coronary heart disease occur even more often than those accompanied by typical attacks of angina. Currently, numerous clinical studies by domestic and foreign cardiologists have clearly shown that the presence of silent myocardial ischemia significantly worsens the prognosis of patients with coronary heart disease.

Results Patients with painless myocardial ischemia are a high-risk group in terms of developing cardiovascular complications compared to patients who do not have episodes of painless myocardial ischemia. A.I. Martynov et al. (1995) note that the risk of sudden death in patients with painless myocardial ischemia increases by 5-6 times, the development of myocardial infarction and chronic heart failure by 1.5 times, and the need for revascularization and/or repeated surgical intervention

arises more often. P. F. Cohn defines "silent" ischemia as an objective manifestation of myocardial ischemia, established by direct and indirect measurement of left ventricular function, perfusion, metabolism, or its electrical activity, not accompanied by anginal chest pain or its equivalents, shortness of breath, arrhythmia, and other unpleasant sensations that occur during physical exertion. According to the classification of P. Cohn (1993), the following types of painless myocardial ischemia are distinguished: - Type I. It occurs in individuals with proven (using coronary angiography) hemodynamically significant stenosis of the coronary arteries, without a history of angina attacks, myocardial infarction, cardiac arrhythmias or congestive heart failure. With Holter ECG monitoring for 24 hours, episodes of ischemic ST depression in these patients are detected in an average of 2-10% of cases. - Type II. It is detected in patients with a history of myocardial infarction without attacks of angina. Episodes of ST depression are recorded in them on average in 38% of cases. - Type III. It occurs in patients with typical attacks of angina or their equivalents. Episodes of ischemic ST segment depression, according to 24-hour ECG monitoring, occur in 82% of cases on average. At the same time, MI can be detected in them 1.5-3 times more often than painful episodes. Currently, a variant (type) of painless myocardial ischemia and no changes on the ECG is distinguished. This is the so-called "latent" or "secret" (clandestine) ischemia, which is diagnosed only by myocardial scintigraphy performed during some kind of exercise test. However, the clinical significance of this "secret" myocardial ischemia has not yet been determined

Discussion

Pathogenesis of MI Many factors that can explain the presence of MI are discussed in the literature. Initially, it was assumed that episodes of MI are shorter in duration and the severity of ischemia during them is less than during attacks of angina pectoris. However, subsequent analysis of large-scale studies using daily ECG monitoring showed that there are no statistically significant differences between episodes of MI and pain attacks in their duration and (or) the magnitude of the maximum ST segment displacement, severity and size of the ischemia zone during myocardial scintigraphy. This allows us to assert that the presence or absence of its clinical manifestations (primarily pain) is determined, first of all, not by the severity and duration of myocardial ischemia, but by some other factors. ICI occurs more often at a lower heart rate, which allowed us to discuss the possibilities of spontaneous changes in the tone of coronary vessels, temporary aggregation of formed elements of blood. However, the connection of the listed factors exclusively with asymptomatic episodes of ischemia raises certain doubts.

Summary. The mechanisms of its development are currently not fully understood and are of considerable interest. Although a number of authors express the position that painless myocardial ischemia may even be useful in a certain sense, since ischemia is the main stimulus for the appearance of collaterals in the myocardium, which means that in patients with painless myocardial ischemia, their more intensive development may occur. On the contrary, a number of researchers [4, 6, 14, 27] believe that it is necessary to eliminate ICM, since its repeated episodes increase myocardial damage, increase the most important problem in cardiology is painless myocardial ischemia. degree of fibrosis and myocardial hypertrophy in 117 GrSMU Journal 2007 No. 4 PRACTICING PHYSICIAN areas of ischemia, and can cause arrhythmia. However, the pathogenesis of these phenomena has not been studied either. In any case, the benefit of drug treatment aimed at eliminating ICM episodes has not yet been definitively proven. Therefore, the study of the problem of painless myocardial ischemia, the state of the oxygen transport function of the blood, endothelial dysfunction and other important indicators in this pathology, as well as possible ways to correct the identified disorders, is very relevant in modern cardiology.

Literature

1. Wierzynska, B. The Importance of Daily Holter ECG Monitoring in Assessing Painless Episodes of ST Segment Decreasing in Patients with IHD / B. Wierzynska // *Cardiology*. - 1990. - Vol. 30. - No. 4. - P. 57-60.
2. Gasilin, V.S. *Angina* / V.S. Gasilin. - M.: Medicine. - 1987. - 240 p.

3. Martsevich, S. Yu. Asymptomatic myocardial ischemia: the possibility of erroneous diagnosis / S. Yu. Martsevich // Therapeutic archive. - 1999. Vol. 71, No. 12.- p. 11-13.
4. Borsuk, Yu. Yu. Predictors of the presence of painless ischemic episodes during Holter ECG monitoring in patients with stable angina / Yu. Yu. Borsuk // Bulletin of arrhythmology. - 2000.- No. 17.- p. 20.
5. Chernenkova, E. A. et al. Detection of painless myocardial ischemia using daily Holter ECG monitoring / E. A. Chernenkova // Bulletin of arrhythmology. – 2000.-№17.- p.76-77.
6. Zakirova, A.N. Painless myocardial ischemia in acute coronary syndrome/A.N.Zakirova // Herald of arrhythmology. – 2000.-№17.- p.30-31.
7. Gratsiansky, N.A. Treatment of acute coronary syndrome without persistent ST segment elevations on ECG/N.A.Gratsiansky// Cardiology. – 2001. – V.1. - №1 p.4-14.
8. Volkov, V.I. "Silent" myocardial ischemia: features of diagnostics and treatment/V.I.Volkov // Russian medical journal. [Electronic resource]. – 2004. – № 2. – Access mode: <http://www.medlinks.ru/journal/2004.2/01.pdf>. – Access date: 16.07.2005.
9. Zimin, Yu.V. Some aspects of clinical application of Holter ECG monitoring/Yu.V.Zimin//Cardiology. – 1986. – Vol.26. - №12. p.116-123.
10. Kokurina, E.V. Angina as a diagnostically unfavorable factor/E.V.Kokurina // Cardiology. – 1987. Vol.27. №1. – p.38-42.
11. Kondratyev, V.V. Painless myocardial ischemia, the current state of the problem and clinically significant aspects of its development / V.V. Kondratyev // Cardiology. - 1997. - V.37. - No. 1.- p.72-