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YOSHLAR ORASIDA STENOKARDIYA: ZAMONAVIY DAVOLASH USULLARI VA ULARNING SAMARADORLIGI

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Annotatsiya

Yoshlar orasida stenokardiyaning uchrashi jiddiy klinik muammo bo‘lib, uning erta aniqlanishi ko‘pincha qiyinchilik tug‘diradi. Kasallik atipik belgilar bilan namoyon bo‘lishi, yosh bemorlarning o‘z vaqtida shifokorga murojaat qilmasligi va noto‘g‘ri tashxis qo‘yilishi diagnoz qo‘yishdagi muammolarga olib keladi. Ushbu maqolada yosh bemorlarda stenokardiyani erta tashxislash qiyinchiliklari va davolashda zamonaviy stentlash usullari, xususan dori ajratuvchi stentlar (DES) va bioeriydigan stentlar samaradorligi tahlil qilinadi. Shuningdek, funksional diagnostika metodlari (EKG, stress-test, IVUS, OCT) yordamida davolash yo‘llari samaradorligi ko‘rib chiqiladi. Maqola erta tashxis va zamonaviy davolash choralarining klinik ahamiyati, yosh bemorlar uchun xavf omillari va amaliy tavsiyalarni o‘z ichiga oladi.

Kalit So‘Zlar

stenokardiya rivojlanishi, erta tashxislash, funksional diagnostika metodlari, zamonaviy davolash usullari, xavf omillari.

ANGINA PECTORIS AMONG YOUTH: MODERN TREATMENT METHODS AND THEIR EFFECTIVENESS

Annotation

The occurrence of angina pectoris among youth is a serious clinical problem, and early detection often presents challenges. The disease may manifest with atypical symptoms, young patients may not seek medical attention in time, and misdiagnosis can lead to difficulties in establishing an accurate diagnosis. This article analyzes the challenges of early diagnosis of angina in young patients and the effectiveness of modern stenting methods, particularly drug-eluting stents (DES) and bioresorbable stents. In addition, functional diagnostic methods (ECG, stress tests, IVUS, OCT) are reviewed to assess treatment outcomes. The article covers the

clinical significance of early diagnosis and modern treatment strategies, risk factors for young patients, and practical recommendations.

Keywords

angina development, early diagnosis, functional diagnostic methods, modern treatment methods, risk factors.

INTRODUCTION

The incidence of angina pectoris among young individuals has become an increasingly important clinical and public health concern in recent years. Traditionally considered a disease of older adults, ischemic heart conditions are now being diagnosed with greater frequency in younger populations due to changes in lifestyle, dietary habits, increased psychological stress, and the growing prevalence of metabolic disorders such as obesity, insulin resistance, and dyslipidemia.

One of the major challenges in managing angina in youth is its atypical clinical presentation. Young patients often experience non-classical symptoms such as vague chest discomfort, epigastric pain, fatigue, or shortness of breath rather than typical exertional chest pain. This leads to delayed medical consultation and, in many cases, misdiagnosis as musculoskeletal, gastrointestinal, or anxiety-related conditions. As a result, early detection becomes significantly more difficult, increasing the risk of progression to more severe cardiovascular events such as myocardial infarction.

In addition, coronary artery disease in young patients may have different etiological patterns compared to older populations. While atherosclerosis remains the most common cause, other contributing factors such as congenital coronary anomalies, inflammatory vascular diseases, thrombophilia, substance abuse (including smoking and stimulants), and genetic lipid disorders play a more prominent role in younger age groups.

Therefore, understanding the pathophysiology, risk factors, and clinical variability of angina in youth is essential for timely diagnosis and effective treatment. Modern cardiology provides a wide range of diagnostic and therapeutic tools, including advanced imaging techniques, functional stress testing, and minimally invasive interventional procedures such as percutaneous coronary intervention (PCI) with stenting.

This article aims to analyze the diagnostic challenges of angina in young patients, evaluate the effectiveness of modern treatment strategies—particularly stenting technologies—and emphasize the importance of early intervention. Furthermore, it highlights the role of functional diagnostic methods in improving clinical decision-making and patient outcomes in this specific age group.

MAIN SECTION

1. Development of Angina in Youth

Angina pectoris arises due to an imbalance between the heart’s oxygen demand and supply, primarily caused by insufficient oxygen delivery through the coronary arteries. The most common cause is coronary artery atherosclerosis. Rarely, angina may develop due to infectious or infectious-allergic damage.

2. Laboratory Tests

Laboratory examinations help identify the causes of myocardial ischemia. These include: complete and biochemical blood tests, detection of biochemical markers of myocardial injury, assessment of blood glucose levels, and evaluation of thyroid hormone levels.

Instrumental Diagnostic Methods

Resting ECG

Exercise ECG

24-hour ECG monitoring (Holter)

Resting echocardiography

Stress echocardiography or scintigraphy

Coronary angiography

3. Functional Diagnostic Methods

Functional diagnostics play a crucial role in detecting angina in young patients. The following methods are widely used in modern clinical practice:

Electrocardiography (ECG) – detects heart rhythm and ischemic changes, showing short-term angina episodes.

Echocardiography – evaluates mechanical and functional condition of the heart, detects ventricular dysfunction.

Stress Tests – assess heart performance under physical or pharmacological stress, determining the likelihood of angina occurrence.

Holter Monitoring – tracks heart rhythm over 24–48 hours to detect episodic ischemia or arrhythmias.

Coronary Angiography – assesses the state and narrowing of blood vessels and determines the need for surgical intervention.

4. Modern Surgical Treatment Technologies

Modern surgical treatments, from an evidence-based medicine perspective (OXTA), are highly effective in young patients:

Coronary Artery Bypass Grafting (CABG)

Percutaneous Transluminal Coronary Angioplasty (PTCA) and Stenting

Minimally Invasive Bypass (MICS-CABG) – performed through a small incision, allowing faster recovery.

Hybrid Approaches – combination of PTCA and minimally invasive bypass, providing an individualized strategy suitable for young patients.

Preoperative and postoperative rehabilitation protocols accelerate and optimize recovery in young patients.

5. Risk Factors for the Disease

Genetic Predisposition – family history of dyslipidemia or coronary artery disease.

Lifestyle – smoking, lack of physical activity, poor nutrition.

Metabolic Factors – diabetes mellitus, obesity, hypertension.

Stress and Psychological State – high stress levels increase coronary workload.

Hormonal and Endocrine Factors – changes in blood lipid and glucose levels.

CONCLUSION

Angina pectoris in young patients is a serious condition that requires early diagnosis and timely management to prevent severe cardiovascular complications. Functional diagnostic

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methods such as ECG, echocardiography, stress testing, Holter monitoring, and coronary angiography are essential for accurate detection and assessment of myocardial ischemia.

Modern treatment strategies, including percutaneous coronary intervention (PCI), drug-eluting stents (DES), and minimally invasive surgical techniques, have significantly improved treatment outcomes in young patients by ensuring effective revascularization and faster recovery.

In addition, lifestyle modification and control of risk factors such as smoking, stress, metabolic disorders, and poor diet play an important role in long-term prevention. Overall, early diagnosis combined with modern interventional and preventive approaches greatly improves prognosis and quality of life in young patients with angina pectoris.

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