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ANGINA PECTORIS: EARLY SIGNS OF CARDIOVASCULAR DISEASES

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Abstract: This article discusses the clinical manifestations, etiology, pathogenesis, diagnosis, and modern methods of treatment for angina pectoris (ischemic heart disease). Various forms of angina, including stable, unstable, and variant angina, are explored in detail. Preventive measures and new technologies used in treatment are also presented. The article is intended for cardiology specialists and medical university students.

Keywords: Angina pectoris, ischemic heart disease, chest pain, cardiovascular diseases, diagnosis, prevention, treatment, nitroglycerin, coronary arteries.

Angina pectoris is one of the most common clinical manifestations of ischemic heart disease (IHD), resulting from insufficient blood supply to the heart muscle. This condition is often the first sign of ischemic heart disease. Pain or discomfort in the chest characteristic of angina pectoris not only diminishes patients' quality of life but can also lead to serious complications, such as myocardial infarction. Early diagnosis and treatment of angina pectoris play a key role in the prevention of cardiovascular diseases.

Types of angina pectoris The clinical classification of angina is based on symptoms, the nature of episodes, and their causes. The main types of angina pectoris are:
1. Stable angina: Symptoms occur during physical or emotional stress and are consistent in intensity. The pain is short-lived and resolves at rest or after taking nitroglycerin. Although stable angina is well-managed, its progression can increase the risk of myocardial infarction.
2. Unstable angina Characterized by new or worsening symptoms that can occur even at rest. This condition is a precursor to a heart attack or other acute complications and requires immediate treatment.

3. Vasospastic angina (Prinzmetal's angina)

Occurs due to spasms in the coronary arteries, often at rest. Symptoms usually manifest at night or early in the morning.

Treatment includes calcium channel blockers and other medications.
Main causes of angina:

1. Atherosclerosis: Formation of plaques in coronary arteries, disrupting blood flow.
2. Arterial spasms: Temporary narrowing of coronary vessels.
2. Thrombosis: Formation of a clot blocking blood flow.

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3. Arterial Hypertension: High blood pressure increases stress on the heart, leading to ischemia.
Risk Factors:

Non-modifiable:
Age: Risk increases after 45 years.

Gender: Men are more susceptible, but risk increases in women after menopause.
Modifiable:
Smoking: Nicotine constricts coronary vessels.
Poor diet: Excess fat increases cholesterol levels and plaque formation.
Sedentary lifestyle: Reduces the heart's functional capacity.
Diabetes and obesity.

Pathogenesis of angina
The mechanism of angina is based on the imbalance between myocardial oxygen demand and supply through coronary arteries. Atherosclerotic plaques narrow the arteries, reducing blood flow. Oxygen deficiency leads to anaerobic metabolism, lactate accumulation, and pain onset. During physical exertion or stress, the heart's oxygen demand increases, but narrowed vessels fail to deliver enough oxygen, triggering an angina attack.
Clinical manifestations The primary symptoms of angina are chest pain or discomfort, but they may vary among patients.
Classic Symptoms: A feeling of tightness, heaviness, or burning in the chest.|Pain radiates to the left arm, neck, jaw, or back.Worsens with physical exertion and improves at rest.
Atypical symptoms: Discomfort in the abdominal region or a feeling of heaviness. Shortness of breath and fatigue. Severe weakness or dizziness, especially in elderly patients.

Diagnostic Methods:

1. Electrocardiography (ECG): Detects ischemic changes such as ST segment depression or T wave inversion.

2. Stress Test: Evaluates heart function under physical stress to detect ischemia.

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3. Coronary Angiography: Identifies areas of coronary artery narrowing and guides treatment decisions.

Surgical Methods:

1. Stenting: Placement of a stent to widen coronary vessels.

2. Coronary Artery Bypass Grafting (CABG): Creating a bypass to restore blood flow.

Stenting is a procedure aimed at widening narrowed or blocked coronary arteries to restore normal blood flow. It is often used to treat ischemic heart disease (IHD) or angina, as well as blockages caused by atherosclerotic plaques or clots. Stenting improves blood circulation, reduces angina symptoms, and lowers the risk of myocardial infarction.

The stenting procedure is divided into several stages:

1. Angioplasty (Percutaneous coronary intervention):

This preparatory step involves inserting a balloon into the narrowed artery. The balloon is inflated to widen the vessel's lumen, after which a stent is placed to maintain the artery's expansion.

2. Stent placement (with Balloon angioplasty):

After the artery is widened with the balloon, a stent—typically a metal or polymer mesh—is implanted to keep the artery open and prevent re-narrowing.

The primary goal of stenting is to restore normal blood flow in narrowed or blocked coronary arteries. The benefits of the procedure include:

Reducing Cchest pain: Stenting alleviates or eliminates angina pain by improving blood supply to the heart muscle.

Lowering the risk of myocardial infarction: The procedure reduces the risk of heart attack by restoring proper blood flow.

Improved physical activity: Patients can regain their physical abilities following successful stenting.

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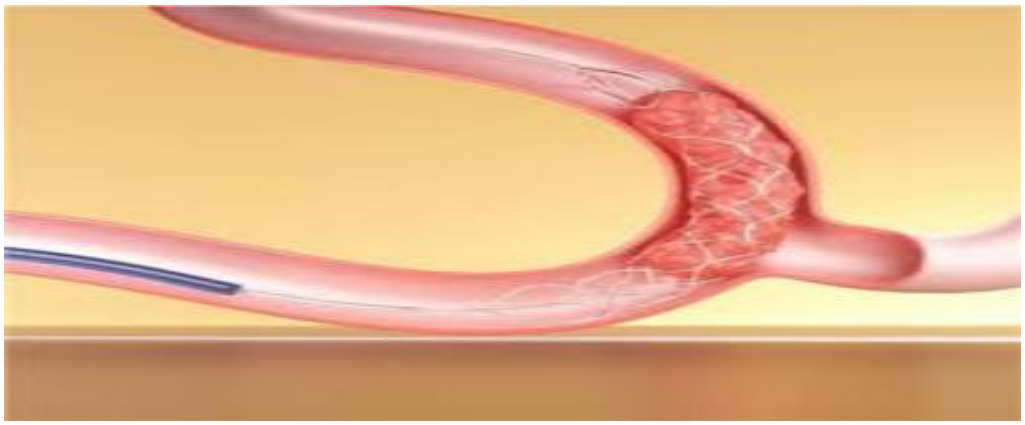

Enhanced quality of life: The procedure significantly improves patients' quality of life by minimizing symptoms and complications related to IHD.

Types of stents

1. Metal stents (Bare-Metal stents):

The most common type, these stents are made of metallic mesh that keeps vessels open after placement.

2. Drug-eluting stents:

These stents are coated with medication to prevent re-narrowing of the vessels and promote tissue healing.

3. Biodegradable stents:

These stents dissolve over time, making them safer for long-term use.

Risks and complications of stenting

Although stenting is relatively safe, it may involve some risks and complications

Thrombosis: A blood clot may form at the stent site, increasing the risk of a heart attack. Patients are typically prescribed anticoagulants to prevent this.

Bleeding: Bleeding may occur during or after the procedure.

Stent or artery rupture: This is a rare but serious complication requiring immediate intervention. Restenosis (Re-narrowing): In some cases, the artery may narrow again, necessitating repeat treatment.

Prevention Measures

Quitting smoking and adopting healthy eating habits.Regular monitoring of heart health.Increasing physical activity and maintaining a healthy weight.

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Conclusion

Angina pectoris is one of the most common cardiovascular diseases, primarily caused by insufficient oxygen delivery to the heart muscle. It is often the first sign of ischemic heart disease and manifests as chest pain or discomfort. Angina can be stable, unstable, or vasospastic, with each form having distinct symptoms and risk factors. Early detection and treatment of angina are crucial for preventing cardiovascular diseases and improving patient quality of life.

The main causes of angina include atherosclerosis, thrombosis, and coronary spasms, while risk factors include smoking, poor diet, and a sedentary lifestyle. Key symptoms of the condition include squeezing, pressing, or burning chest pain, which may worsen with physical exertion or stress. Diagnostic methods include electrocardiography, stress tests, and coronary angiography. Treatment options range from medication to surgical interventions. Essential preventive measures include quitting smoking, maintaining a healthy diet, and engaging in regular physical activity.

References

1. Kuyumov, S. S., & Sodikov, A. N. (2019). Cardiovascular Diseases: Diagnosis and Treatment Methods. Tashkent: “Tibbiyot” Publishing.

2. Bikbov, R. R. (2020). Ischemic Heart Disease: Clinical Features and Treatment Methods. Tashkent: “Uzbekistan” Publishing.

3. Shirinova, M. T. (2018). Cardiology: Stable Angina and Its Types. Tashkent: “Medical Press” Publishing.

4. Williams, B., & Lindholm, L. (2017). Management of Coronary Artery Disease: A Global Perspective. Cardiology Journal, 10(3), 301–312.

5. Guzman, M., & Fletcher, R. (2019). Pathophysiology of Angina Pectoris: New Insights into Treatment Options. Heart Review, 24(2), 120–135.