Karagandy State Medical University
Department of foreign languages

СРСП

The theme:
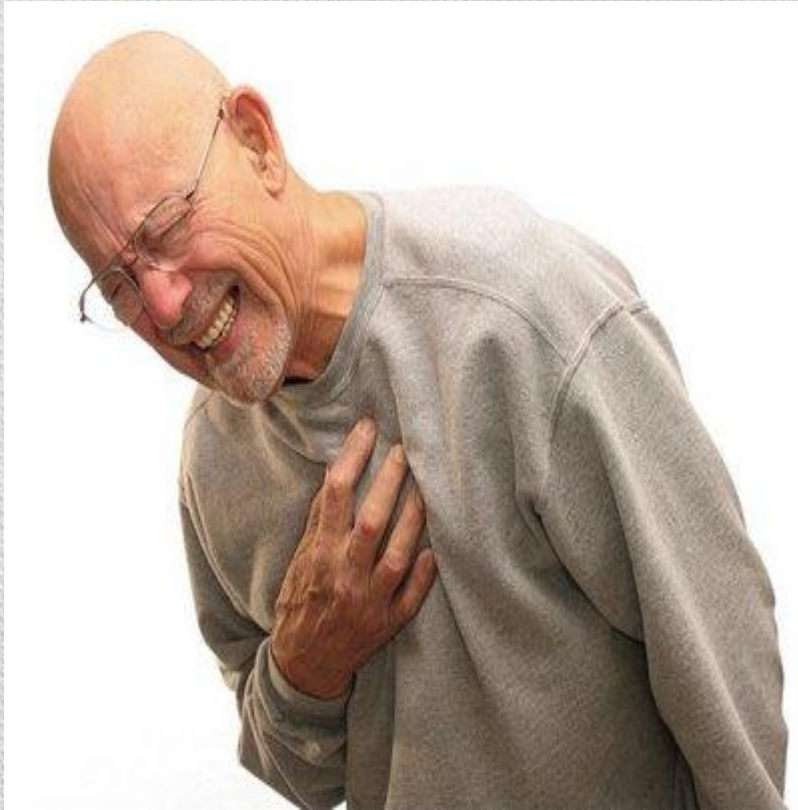Angina pectoris
Согласование времен.

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Plan

- What is angina pectoris
- Classification
1. Stable angina
2. Unstable angina
3. Microvascular angina
- Pathogenesis
- Treatment for jaundice
- Symptoms

Angina pectoris – commonly known as **angina** – is chest pain due to ischemia of the heart muscle, generally due to obstruction or spasm of the coronary arteries. The main cause of Angina pectoris is coronary artery disease, due to athetosclerosis of the arteries feeding the heart. The term derives from the Latin *angina* ("infection of the throat") from the Greek *ἀγχόνη ankhonē* ("strangling"), and the Latin *pectus* ("chest"), and can therefore be translated as "a strangling feeling in the chest".

There is a weak relationship between severity of pain and degree of oxygen deprivation in the heart muscle (i.e., there can be severe pain with little or no risk of a heart attack, and a heart attack can occur without pain). In some cases Angina can be extremely serious and has been known to cause death. People that suffer from average to severe cases of Angina have an increased percentage of death before the age of 55, usually around 60%.

Classification

- Stable angina
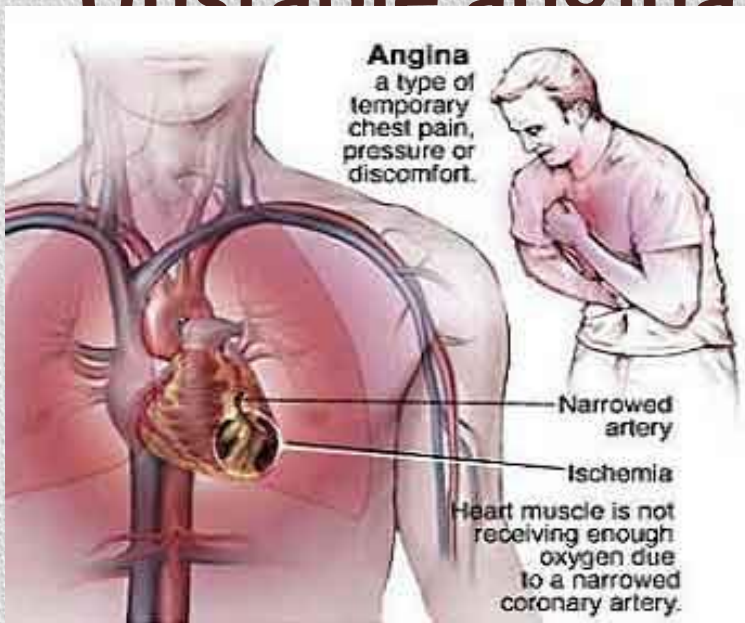- Unstable angina
- Microvascular angina
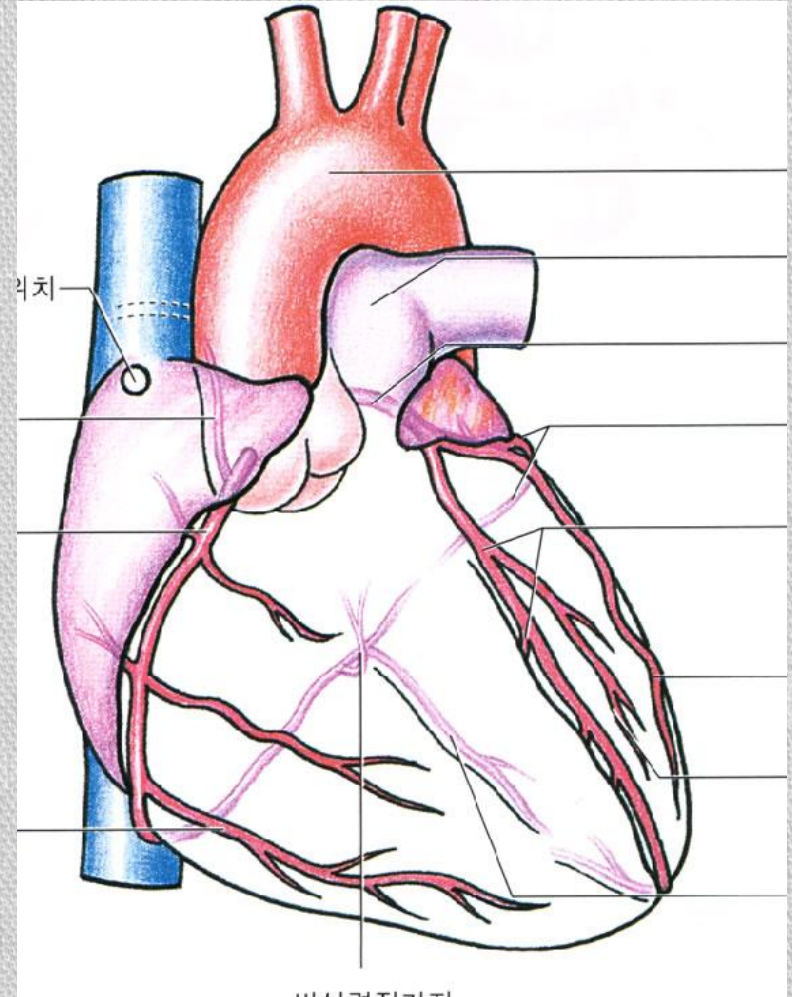
Stable angina
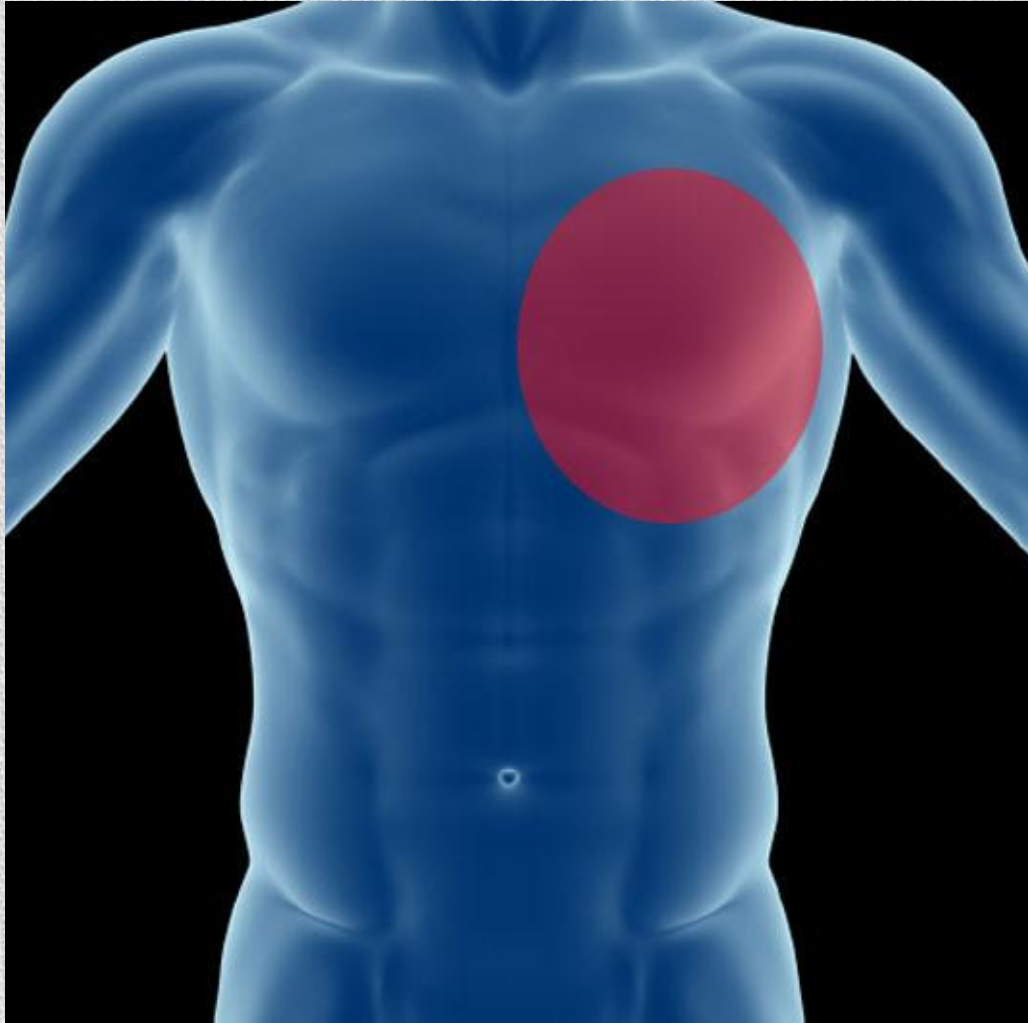
Stable angina Also known as *effort angina*, this refers to the more common understanding of angina related to myocardial ischemia. Typical presentations of stable angina is that of chest discomfort and associated symptoms precipitated by some activity (running, walking, etc.) with minimal or non-existent symptoms at rest or with administration of sublingual nitroglycerin. Symptoms typically abate several minutes following cessation of precipitating activities and reoccur when activity resumes. In this way, stable angina may be thought of as being similar to intermittent claudication symptoms.

Unstable angina

Unstable angina (UA) (also "crescendo angina;" this is a form of acute coronary syndrome) is defined as angina pectoris that changes or worsens. It has at least one of these three features:

- it occurs at rest (or with minimal exertion), usually lasting >10 min;
- it is severe and of new onset (i.e., within the prior 4–6 weeks); and/or
- it occurs with a crescendo pattern (i.e., distinctly more severe, prolonged, or frequent than before).

UA may occur unpredictably at rest which may be a serious indicator of an impending heart attack. What differentiates stable angina from unstable angina (other than symptoms) is the pathophysiology of the atherosclerosis. The pathophysiology of unstable angina is the reduction of coronary flow due to transient platelet aggregation on apparently normal endothelium, coronary artery spasms or coronary thrombosis. The process starts with atherosclerosis, and when inflamed leads to an active plaque, which undergoes thrombosis and results in acute ischemia, which finally results in cell necrosis after calcium entry. Studies show that 64% of all unstable anginas occur between 10 PM and 8 AM when patients are at rest.

In stable angina, the developing atheroma is protected with a fibrous cap. This cap (atherosclerotic plaque) may rupture in unstable angina, allowing blood clots to precipitate and further decrease the lumen of the coronary vessel. This explains why an unstable angina appears to be independent of activity.

Microvascular angina

Microvascular Angina or Angina Syndrome X is characterized by angina-like chest pain, but has different causes. The cause of Microvascular Angina is unknown, but it appears to be the result of poor function in the tiny blood vessels of the heart, arms and legs. Since microvascular angina isn't characterized by arterial blockages, it's harder to recognize and diagnose, but its prognosis is excellent.

Signs and symptoms
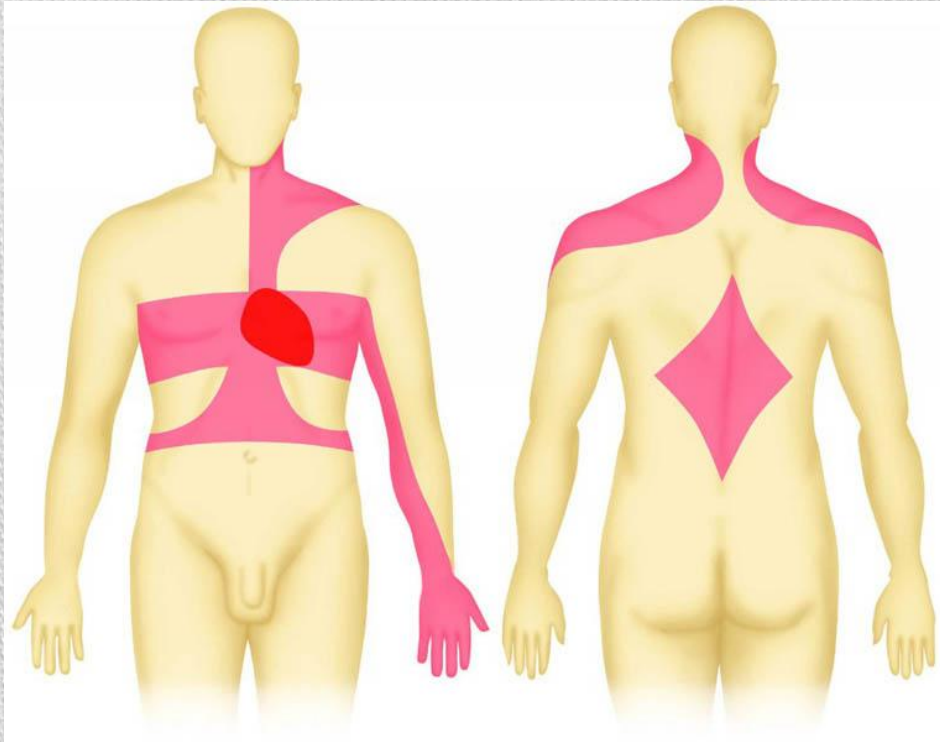
Most patients with angina complain of chest discomfort rather than actual pain: the discomfort is usually described as a pressure, heaviness, tightness, squeezing, burning, or choking sensation. Apart from chest discomfort, anginal pains may also be experienced in the epigastrium (upper central abdomen), back, neck area, jaw, or shoulders. This is explained by the concept of referred pain, and is due to the spinal level that receives visceral sensation from the heart simultaneously receiving cutaneous sensation from parts of the skin specified by that spinal nerve's dermatome, without an ability to discriminate the two. Typical locations for referred pain are arms (often inner left arm), shoulders, and neck into the jaw. Angina is typically precipitated by exertion or emotional stress. It is exacerbated by having a full stomach and by cold temperatures. Pain may be accompanied by breathlessness, sweating and nausea in some cases. In this case, the pulse rate and the blood pressure increases. Chest pain lasting only a few seconds is normally not angina (such as Precordial catch syndrome).

Diagnosis

Suspect angina in people presenting with tight, dull, or heavy chest discomfort which is:

- Retrosternal or left-sided, radiating to the left arm, neck, jaw, or back.
- Associated with exertion or emotional stress and relieved within several minutes by rest.
- Precipitated by cold weather or a meal.

Some people present with atypical symptoms, including breathlessness, nausea, or epigastric discomfort or burping. These atypical symptoms are particularly likely in older people, women, and those with diabetes. Angina pain is not usually sharp or stabbing or influenced by respiration. Anti-acids and simple analgesia do not usually relieve the pain. If chest discomfort (of whatever site) is precipitated by exertion, relieved by rest, and relieved by glyceryl trinitrate, the likelihood of angina is increased.[

Treatment

Blocked Lumen in Branch of Left Coronary Artery
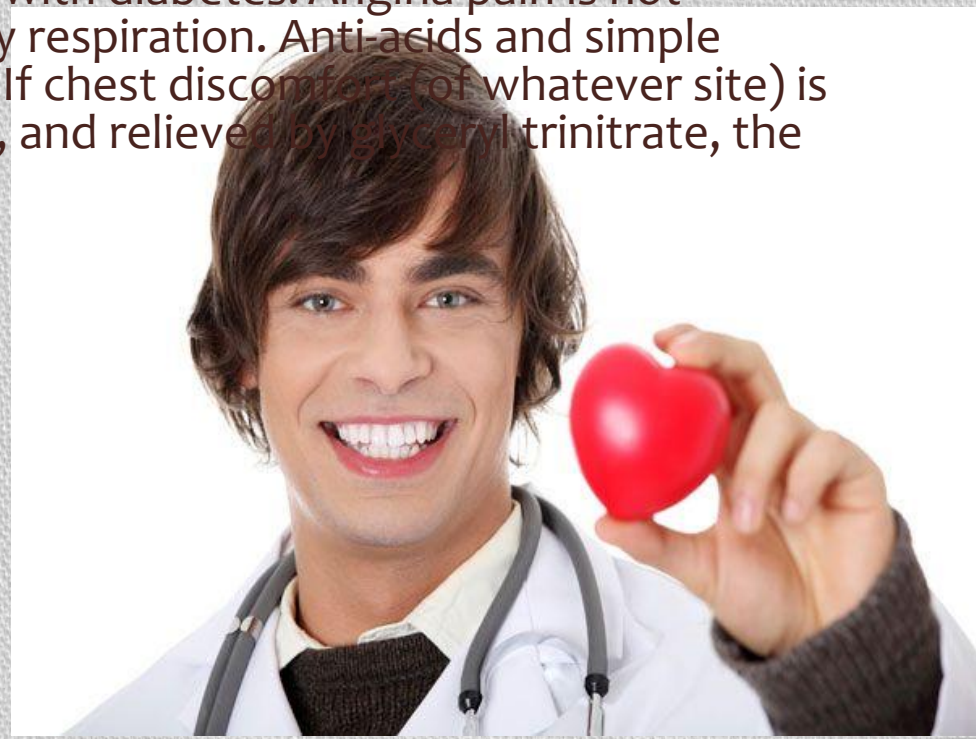
Anterior infarct
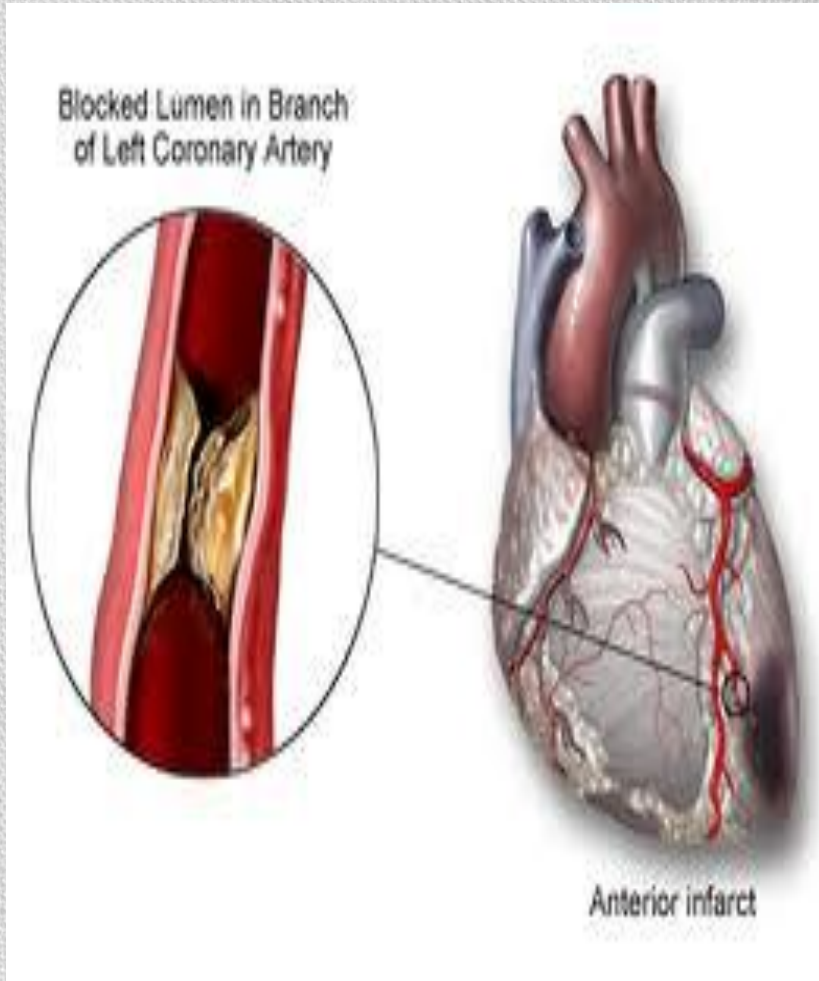
The most specific medicine to treat angina is nitroglycerin. It is a potent vasodilator that makes more oxygen available to the heart muscle. Beta-blockers and calcium channel blockers act to decrease the heart's workload, and thus its requirement for oxygen. Nitroglycerin should not be given if certain inhibitors such as Sildenafil (Viagra), Tadalafil (Cialis), or Vardenafil (Levitra) have been taken within the previous 12 hours as the combination of the two could cause a serious drop in blood pressure. Treatments are balloon angioplasty, in which the balloon is inserted at the end of a catheter and inflated to widen the arterial lumen. Stents to maintain the arterial widening are often used at the same time. Coronary bypass surgery involves bypassing constricted arteries with venous grafts. This is much more invasive than angioplasty.

СОГЛАСОВАНИЕ ВРЕМЕН

Время, требующееся по смыслу и ситуации (в прямой речи)	Время, фактически употребляемое в придаточном предложении (в косвенной речи)
Present Indefinite	Past Indefinite
Past Indefinite	Past Perfect
Present Continuous	Past Continuous
Past Continuous	Past Perfect Continuous
Present Perfect	Past Perfect
Past Perfect	Past Perfect
Present Perfect Continuous	Past Perfect Continuous
Past Perfect Continuous	Past Perfect Continuous
Future Indefinite	Future Indefinite in the Past

Таблица согласования времен в косвенной речи

	Present Simple	Present Progressive	Present Perfect	Past Progressive	Past Simple	Future Simple
Прямая речь	$V_{(s)}$	am is are Ving	has have V_3^{ed}	was were Ving	V_2^{ed}	shall will V
Косвенная речь	Past Simple V_2	Past Progressive was were Ving	Past Perfect had V_3^{ed}	Past Progressive was were Ving / Past Perfect Progressive had been Ving	Past Perfect had V_3^{ed}	Future-in-the Past should would V

Example

- I thought that the patient will complain of chest pain.
- I knew that the patient also observed the pain increasingly on the move and during exercise.