# ANAMNESIS OF CARDIOVASCULAR DISEASE

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**Abstract:** In recent years, the incidence of cardiovascular diseases has increased. Despite advances in medicine, their diagnosis is a challenge. A large proportion of patients remain undiagnosed or detect the disease late, when irreversible processes have occurred in the cardiovascular system and the body as a whole. The purpose of this article is to present more characteristic features when taking anamnesis in patients with cardiological diseases. Every examination of a patient begins with questioning the patient. It is necessary to give the patient the opportunity to answer the questions comprehensively, without being interrupted. It is important to note that no period of the subject's development should be neglected. The predisposition to the development of cardiopathies may have a genetic component (the presence of a genetic disease) and a family burden (a parent with this disease). The occurrence of cardiological disease may be due to the neonatal period of development - viral diseases and drug treatment of the mother; structural features in the development of the fetus. Through the anamnesis, important information can be obtained about the growth and development of the child during childhood and adolescence, as well as about past illnesses and the complications caused by them. The current condition of the patient has a central place in the anamnesis. The presence of fatigue, shortness of breath, edema, pain in the chest area point us to the cardiological nature of the health problem of the subjects. Reporting in the anamnesis data on concomitant diseases related to the respiratory, endocrine and nervous systems can guide us and/or explain the occurrence of cardiovascular disease. We are interested in past illnesses and traumas that are related to the current problem. Reporting poor eating and exercise habits, combined with psycho-emotional stress in everyday life and work, can be considered as a link to the occurrence of acute cardiac diseases. The experience of viral diseases often leads to heart complications. The modern framework for assessing the patient's condition "SOCRATES" is a good basis for acquiring data from the anamnesis through the correct structuring of the questions. A well-taken history can save time and money in diagnosing cardiovascular diseases, and identifying risk factors helps cardiac rehabilitaters take adequate measures to improve the patient's condition. Revealing details about the patient's health depends on the examiner's experience in predisposing him and asking the right questions. Earlier detection of a cardiac problem, through an accurate history, would help take adequate measures to prevent complications arising from it.
**Keywords:** cardiovascular disease, patients, medical history (anamnesis)

## 1. INTRODUCTION

Cardiovascular diseases are a serious socio-economic factor, prevalent among more and more people of working age (Zlatkova et al., 2022). Despite advances in medicine, diagnosing these diseases is a serious challenge. Very often, patients ignore the first symptoms and seek medical help when their cardiovascular system is too compromised. The occurrence of irreversible consequences complicates and/or makes the treatment of these patients difficult or impossible. An important component in the therapy of those affected by cardiovascular diseases is cardiac rehabilitation.

Cardiac rehabilitation has undergone changes over the years. From a program focused on exercise therapy, today it emphasizes secondary prevention, targeting nutritional, physical, behavioral, and medical factors that may put the patient at risk for a subsequent coronary event. According to Medicare, rehabilitation should not be focused only on the implementation of exercises, but should be multidisciplinary, aimed at reducing the risk of developing cardiovascular disease through changes in risk factors and lifestyle (Kraus & Keteyan, 2007).

Various risk factors underlie the development of cardiovascular diseases, and taking a history can help determine the specific stage of the disease. Data from the history are of essential clinical importance in diagnosing patients and taking adequate therapeutic measures (Narasimman & Choudhari, 2022). The presence of risk factors even in the past, such as high cholesterol, triglycerides, high blood sugar, smoking, overweight, can explain the occurrence of some cardiac diseases (Gibbs, 1990).

Every cardiac procedure begins with a history. The main characteristics of a cardiac history are completeness, clarity, and chronology. A comprehensive history guides the diagnosis in a specific direction, saving time and money. (Masic et al., 2018). According to Malik and Goyal (2023), the combination of a detailed history and a cardiac examination leads to the diagnosis of 80% of cardiac diseases (Malik and Goyal, 2023).

The history should be searched for chest pain, shortness of breath, cyanosis, claudication, palpitations, orthopnea, edema, paroxysmal dyspnea, dizziness, fatigue, vertigo, etc. (Gibbs 1990).
The purpose of this article is to present more characteristic features when taking a history in patients with cardiac diseases.

## 2. MATERIALS AND METHODS

Using a deductive method, we analyzed the available literature sources (Subeva, Gramatikova, 2024) regarding the specifics of taking a history in patients with cardiovascular diseases.

## 3. RESULTS AND DISCUSSION

From the analysis of the available literature on the topic of anamnesis in cardiovascular diseases, it is clear that most authors emphasize direct questioning (Venova et al., 1991). Some authors mention that the necessary data can be obtained from relatives or from the patient's medical record (Gibbs, 1990).
Taking an accurate history is refined with experience. The level of detail depends on the patient's emotional and physical condition; educational and economic background; and the way in which questions are asked. It is necessary to ask open-ended questions and listen to the patient's full response. It is necessary to pay attention to: Has the patient had a cardiac problem? When was the diagnosis made? How was it made? By whom? What therapeutic measures have been taken? Has the patient undergone any type of examination to evaluate the heart? What medications are they taking? Are there any records of recent hospitalizations? (Gibbs, 1990).
Structurally, the anamnesis consists of several sections - "passport data, current illness, past illnesses and life history". The passport data includes important data about the patient himself - name, profession, age, work, education, marital status, etc. The "Current illness" section includes questions that are of a clarifying nature for diagnosing the disease such as: onset of the disease, what were the first symptoms, how the disease progresses, the patient's complaints, tests and therapies that have been applied so far, complaints of other organs and systems. The "Past illnesses" section focuses on traumas and illnesses that he has suffered and the possible connection with the symptoms that have arisen. The "Life history" consists of two parts: "social and domestic" and "family history and heredity". The "social and domestic" history provides information on lifestyle (humidity, dustiness, nutrition, psycho-emotional life, etc.), since many diseases are due to them. In the "family history and heredity" the health status of relatives is emphasized (Venova et al., 1991).
When conducting an examination in pediatric cardiology, it is necessary to emphasize the symptoms that reveal the presence of heart damage, as well as the development during the neonatal and postnatal period.
In children, the main symptoms are dyspnea, edema and cyanosis. In the anamnesis, attention is paid to the health status of the mother, i.e. family history (epileptic therapy, diabetic cardiomyopathy, progesterone-estrogen therapy). The anamnesis of pregnancy is important, related to the appearance of the teratogenic factor during organogenesis and the fetal period of fetal development such as bleeding during pregnancy, physical, biological and drug factors, etc. Biological factors affecting the fetus are most often viruses, such as viral herpes, AIDS, coxsackie viruses, cytomegalovirus, rubella, etc. For example, patent ductus arteriosus and pulmonary stenosis are more common in rubella. Chemical factors include the mother's harmful habits during pregnancy such as smoking, alcohol and/or drugs, which have a cardiotropic effect. Physical factors with an important impact on the cardiovascular system in the neonatal period are birth weight, heart rate and Apgar score. In the postnatal period, emphasis is placed on comparing the development of another child in the family, the presence of dyspnea, skipping meals or breaks, changes in the color of the nail roots and/or lips; taking a knee-chest position during sleep. The presence of excessive sweating may indicate abnormalities of the left-right shunt. In preschool age, attention is paid to the presence of a delay in the child's growth and development; intolerance to exercise, skin color, hypoxemic seizures, etc. In adolescents, the presence of pericardial pain, shortness of breath, fatigue, headache, etc. In the history of cardiopathies, it is important to specify the presence of past streptococcal infections, their treatment and allergies (Masic et al., 2018).
Some genetic diseases are associated with an increased risk of cardiovascular events. Reporting the presence of these diseases can direct the examiner to the specific problem, and we as physiotherapists can take the necessary measures to prevent or slow the development of the specific disease.
Marfan syndrome can cause aortic dissection (aortic regurgitation). Down syndrome has a ventricular and atrial septal defect. Turner syndrome patients are predisposed to coarctation of the aorta. Those affected by spondyloarthritis (e.g. ankylosing spondylitis) are at increased risk of aortic regurgitation (Asley & Niebauer, 2017).
Popova et al. (2017) citing the American Heart Association/American Stroke Association, share that the time of onset of symptoms is of great importance (Popova et al., 2017). In the acute state of patients, cyanosis, sweating,

pallor are noted. In some patients, cachexia is an important prognostic sign of heart failure (Asley & Niebauer, 2017).

Atypical chest pain is often encountered in practice. In these cases, it is necessary to take an accurate history. Acute, stabbing pains localized elsewhere or occurring after palpation are unlikely to be of a cardiac nature. The most common non-cardiac cause of pain in the cardiac area is dyspepsia. Chest pain occurring after a heavy meal may be of biliary, gastroesophageal, or cardiac origin. Pain after physical exertion is rarely of biliary origin. Differentiating between esophageal spasm and cardiac pain is difficult, as both improve after taking medication. Other causes of chest pain of a non-cardiac nature are musculoskeletal and pleural (Asley & Niebauer, 2017). Sudden onset of pain and dyspnea with signs of right heart failure may be due to pulmonary embolism (Zuin et al., 2017).

Depending on the diagnosis, patients may report the following characteristic symptoms:

In ***valvular disease*** - Patients report chest pain and/or palpitations, as well as a systolic murmur (Gibbs, 1990).

In the presence of a heart murmur, it is important to determine the date of its occurrence and the presence of physical limitations for the patient (Gibbs, 1990).

In ***rheumatic fever***, it is important to specify the presence of fever, heart murmur and sore throat (Gibbs, 1990).

In ***heart failure***, there is evidence of dyspnea on exertion (Gibbs, 1990). ***Left-sided chronic heart failure*** is characterized by shortness of breath when lying down and during physical work, poor sleep, nervousness, general weakness, easy fatigue and heaviness in the chest. Subsequently, cough and phlegm appear (Zhelev, 2015). ***Right-sided chronic heart failure*** is manifested by fatigue and shortness of breath during physical work with cyanosis (Zhelev, 2015).

In ***arterial hypertension***, the patient reports headaches, tinnitus, dizziness, nausea and vomiting, palpitations, angina, shortness of breath, visual disturbances (Zhelev, 2015). It is important to specify how the patient was diagnosed and whether he is taking medication (Gibbs, 1990).

***Hypotension*** is characterized by lethargy, fatigue, decreased performance, dizziness. (Zhelev, 2015).

When s***urgery*** is performed, it is necessary to note the type of surgery and the reason (Gibbs, 1990).

In ***coronary or peripheral artery diseases,*** "cold extremities", "cramps", "poor blood circulation" are reported (Gibbs, 1990).

***Angina pectoris*** - The classic symptoms are tightness in the chest, with possible irradiation to the neck, jaw, epigastrium, both upper limbs and back (Asley & Niebauer, 2017). The pain occurs during mental stress or physical exertion, radiating to the left arm along the ulnar edge and reaching the little finger (Zhelev, 2015).

***"Unstable angina***" - characterized by pain at rest, which is not relieved by medications under the tongue. It lasts more than 30 minutes, can occur for days and weeks with lower loads (crescendo angina) (Asley & Niebauer, 2017).

***Myocardial*** infarction - Sweating, nausea and vomiting (Asley & Niebauer, 2017). Myocardial infarction is characterized by several syndromes. "Status anginosus" - pain behind the sternum radiates to the left side - shoulder, arm, neck and lower jaw. Sometimes the pain radiates to the back and right side of the body and epigastrium. The duration of the pain can vary from hours to days. The fear of "death" and the psychomotor agitation of the patient are characteristic. "Status gastralgicus" - The patient reports pain in the abdomen and epigastrium. "Status asthmaticus" - in addition to shortness of breath, cardiac asthma and pulmonary edema are observed in severe infarction (Zhelev, 2015).

***Pericarditis*** - Characterized by pleural pain that worsens with position change due to pericardial friction (Zuin et al., 2017).

***Aortic dissection*** - The pain appears suddenly and radiates backward. Changes in the peripheral pulse are observed (Zuin et al., 2017).

***Inflammatory diseases*** of the heart are characterized by fever, fatigue, shortness of breath, loss of appetite, etc. In endocarditis, there may be pain in the joints and fingers. In myocarditis and pericarditis, pain and heaviness in the chest area are noted. In patients with myocarditis, foamy sputum and swelling in the lower extremities may appear. In pericarditis, the pain radiates and is aggravated by movements, coughing, breathing. When certain nerves are compressed, certain symptoms may appear, such as: hiccups and rapid breathing (n. phrenicus), hoarseness (n. recurrens), shortness of breath and cough (n. vagus), tachycardia (n. sympathicus) (Zhelev, 2015).

A hereditary component to the presence of cardiovascular disease is found among young people whose parents have cardiac disease. For example, patients with a family history of hypertension are more likely to develop it, and even healthy ones may have a slower recovery from laboratory testing. Wright et al. (2007) studied 103 students aged 18-25 years who were not taking medication and were clinically healthy. The authors found that 75 participants had a positive family history of cardiac disease, and 16 had a negative history. The subjects underwent two stress tests in laboratory conditions, monitoring heart rate and arterial pressure at rest and three times (15 min apart) after the test. The authors reported a worse recovery of the indicators in those with a positive family history compared to participants with a negative history (Wright et al., 2007).

The SOCRATES approach is suitable for determining the nature of the pain and the symptoms it provokes (Peart, 2022). It is a modern framework for successfully taking a detailed history. Understanding the abbreviation allows you to ask the appropriate questions to obtain more information.

"S- Site"- Where is the pain located? -In myocardial ischemia it is in the jaw, neck, retrosternal, back and both arms. In pericarditis it is in the center of the chest, shoulders and back. In aortic dissection the pain is behind the sternum and radiates to the back and abdomen (Alkhaqani, 2023).

"O- Onset"- When and how did the pain start? Angina pain can occur in cold weather, emotions and exercise. Pain in acute coronary syndrome can occur both at rest and with effort. It most often occurs in the morning, upon waking. Pericardial pain is evidenced by the presence of recent flu-like symptoms, and it can also occur up to 3-6 weeks after a myocardial infarction (Alkhaqani, 2023). .

"C- Character"- What is the type of pain - sharp, dull, burning, etc. The pain of myocardial infarction is described as tightening, pressing, and sometimes severe heaviness. In aortic dissection, the patient reports a feeling of tearing. The pain of pericarditis is constant and severe(Alkhaqani, 2023).

"R – Radiation"- Does the pain radiate? Characteristic of cardiac pain is that it radiates. Pericardial pain spreads to the shoulders and around m. trapezius. In aortic dissection, the pain radiates to the back and abdomen. Ischemic pain radiates to the jaw, arms and back (Alkhaqani, 2023).

"A – Associations" - Are there other symptoms? In myocardial infarction, in addition to pain, the patient may report dyspnea, syncope, nausea, severe anxiety, etc. In pericarditis, the patient reports worsening of symptoms when inhaling. If a major vessel of the neck and head is affected in aortic dissection, collapse or neurological involvement may occur (Alkhaqani, 2023).

"T - Time course"- Does the pain change during the day - worsening, fluctuating, improving? The pain of myocardial infarction can appear suddenly and last more than 20 minutes without relief. Sudden onset and constant pain is observed in aortic dissection (Alkhaqani, 2023).

"E - Exacerbating / Relieving factors"- Is there anything that improves or worsens the pain? Angina pain is exacerbated by physical exertion, emotions, extreme weather conditions and after eating. Pain of pericardial origin is relieved by bending forward (Alkhaqani, 2023).

"S – Severity"- How severe is the pain from 1 to 10? (Alkhaqani, 2023).

Taking a history is important for all healthcare professionals. Often, patients with concomitant cardiac diseases or undiagnosed ones come to us for rehabilitation. Taking an accurate history would help us choose an adequate load or refer the patient to a cardiologist.

## 4. CONCLUSION

A well-taken history can save time and money in diagnosing cardiovascular diseases, and identifying risk factors helps cardiac rehabilitaters take adequate measures to improve the patient's condition. Revealing details about the patient's health depends on the examiner's experience in predisposing him and asking the right questions. Earlier detection of a cardiac problem, through an accurate history, would help take adequate measures to prevent complications arising from it.

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