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CLINICAL CASE OF A PATIENT WITH LERICHE SYNDROME

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We want to tell about a current case using global and our own knowledge and experience.

Abstract
This article presents a clinical case of the development of intermittent claudication in a patient with Leriche syndrome, who for 25 years had been abusing bad habits such as: smoking - 1 pack in 1.5 days, smoking experience - over 20 years. Black, strong coffee over 5 cups a day, which, according to our observations, are harbingers of the development of chronic ischemia of the pelvic organs and lower extremities. The influence of risk factors at such an early age is described, as a result of which the quality of life deteriorated, the ability to work decreased with the subsequent development of disability.

Introduction

Background. Leriche syndrome is an occlusion of the bifurcation of the aorta and the initial sections of the common iliac arteries, which causes chronic ischemia of the pelvic organs and lower extremities. The disease manifests itself as high intermittent claudication, ischemic lesions of the tissues of the legs. Impotence is possible in men. Diagnosis of the syndrome involves ultrasound of the aorta and the branch vessels of aorta, aortography, checking of the lipid profile and coagulogram. Conservative treatment is prescribed in the early stages of the disease. Surgical methods include reconstructive aortic plastic surgery, aortofemoral bypass, lumbar sympathectomy [1].

The syndrome is named after the French physiologist and surgeon René Leriche , who described the pathology in 1923. R. Leriche called this condition terminal aortitis and identified 5 main clinical manifestations. Exact data on the prevalence of abdominal aortic occlusion are unknown, since in some patients it is asymptomatic. In European countries, the disease affects an average of 1% of the population. The manifestation of the syndrome usually at the age of 40-60 years. The ratio between men and women among patients, according to observations of various authors, ranges from 10:1 to 30:1. Identification of the main risk factors and assessment of the total cardiovascular risk with short-term preventive counseling of the patient to correct risk factors is the basis of primary prevention of cardiovascular diseases [2]. Leriche's disease is characterized by damage to various layers of the vascular wall, which is determined by the etiology of the process. Atherosclerosis is characterized by changes in the aortic intima, the formation of lipid plaques that block the lumen of the vessel. In aorto-arteritis, the middle and outer layers of the aortic wall thicken predominantly, and perifocal inflammation of the autoimmune type often begins.

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The pathophysiological basis of the disease is a progressive decrease in blood flow in the vessels of the lower extremities and pelvic organs. Due to the steal syndrome, which leads to insufficient blood flow to the inferior mesenteric artery, ischemia of the internal organs of the abdominal cavity is observed. Hemodynamically significant disorders are determined with occlusion by 60-70%. The degree of compensation of the process depends on the rate of formation of vascular collaterals.

This article presents a clinical case of the development of Leriche syndrome with the presence of bad habits, which, according to our observations, further aggravated the severity and clinical course of the disease.

Research Material

Clinical case. Patient A., born in 1982 (42 years old), was admitted on 04/17/2024 to the multidisciplinary clinic of the center for the development of professional qualifications of medical workers in the cardiology department with complaints headaches, dizziness, tinnitus, high blood pressure, periodic discomfort in the heart area, stomach pain, nausea, vomiting, blurred vision, irritability, insomnia, general weakness.

Research methods. From the anamnesis, the patient reads herself for 5 years, when intermittent claudication, moderate pain in the stomach, nausea, vomiting, food ingested, heartburn, weight loss, general weakness first appeared. According to the patient, in 2019 with a clinic of bleeding from the gastrointestinal tract (GIT) she was urgently admitted to the City Clinical Hospital of Emergency Medical Care (CCHEMC) of Tashkent, on 11.06.2021 with a diagnosis of Gastric ulcer (PU), complicated by perforation of the gastric ulcer, diffuse serous-fibrinous peritonitis, she was again admitted to the same clinic, while she does not have any discharge papers with her. On September 28, 2021, at the Republican Specialized Scientific and Practical Medical Center (RSSPMC) of Surgery named after Academician V. Vakhidov, there was an operation Recanalization and angioplasty of the superficial femoral artery (SFA), popliteal artery (PA), anterior tibial artery (ATA), posterior tibial artery (PTA) a . plantaris lateralis and peroneal artery (PFA) on the left. Repeated surgeries for gastric ulcer, SPO arterialization of venous blood flow of the left lower limb (from 07/27/2022). SPO amputation of the left lower limb at the level of c / 3 of the thigh, amputation of the 2nd toe of the right foot (09/29/2022). The last operation from 03/04/2022 - resection of 2/3 of the stomach according to Bilroth-2 in the modification of Hofmeister - Finsterer to exclude the ulcer. Maximum increase in blood pressure to 170/90 mm Hg . Regularly at home she took Eliquis 2.5 mg, Nolpaza 40 mg, Torvator 20 mg, Cardiomagnyl 75 mg. Repeatedly treated on an outpatient and inpatient basis. Recently, the above complaints have become more frequent, which is why she was admitted to inpatient treatment at the multidisciplinary clinic of the center for the development of professional qualifications of medical workers on the basis of an order. In her medical history, the following diseases predominated: hypertension (I 11.0), chronic gastritis (K29.0), chronic colitis (K52.0), chronic anemia (D 50.0) according to ICD-10. Bad habits: smokes 1 pack every 1.5 days, smoking history is over 20 years. Abuses coffee - 6 cups a day.

Upon admission to the multidisciplinary clinic of the center for the development of professional qualifications of medical workers, the patient's condition was assessed as moderate. Clinical health indicators: body temperature 36.6 °C, heart rate 76 beats per minute, blood pressure 120/70 mm Hg, respiratory rate 18 per 1 min.

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Table 1. Dynamics of clinical blood test parameters

Indicators/Date	14.03.2024	04.11.2024
Erythrocytes , x 10 ^{12} /l	4.6	3.8
Hemoglobin , g/l	127	93
Hematocrit, %	41.8	38
Leukocytes , x10 ^{9} /l	8.6	5.2
Band neutrophils , %	5.1	1
Segmented neutrophils , %	53	67
Eosinophils , %	0, 19	2
Monocytes , %	0.48	7
Lymphocytes , %	32.2	28
Platelets, x10 ^{9} /l	418	260
ESR, mm/h	12	4

Table 2. Dynamics of biochemical blood test parameters

Indicators/Date	18.04.2024	04.11.2024
ALT, mlmol /l	0,29	0.11
AST, mlmol /l	0,15	0.13
Total bilirubin, mlmol /l	12,15	5.0
Urea, mlmol /l	3,8	5.8
Creatinine, mmol /l	135,2	57
Total protein, g/l	63,2	70
Glucose, mmol /l	4,7	6.0

Table 3. Dynamics of clinical urine analysis parameters

Indicators/Date	18.04.2024	25.04.2024	04.11.2024
Quantity, ml	40.0	50.0	60.0
Color	light yellow	yellow	light yellow
Transparency	transparent	transparent	transparent
Relative density	mm	1018	1010
Reaction	sour	sour	Sour
Protein, g/l	abs	0.033	abs
Bilirubin	negative	negative	negative
Epithelium:			
Flat:	in large quantities	15-13	0-1
Renal:	3-5	3-1	-
Leukocytes	4-7	27-24	1-2
Bacteria	++	+++	-
Mucus	++	++++	-

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Table 4. Dynamics of coagulogram index (PTI)

Indicators/Date	29.09.2022	04.11.2024
PTI, %	111	84.61

Table 5. Dynamics of the lipid profile indicator

Indicators/Date	28.09.2021	17.04.2024
HDL (HDL), mmol /l	0.9	1.23
LDL(LDL), mlmol /l	1.42	1.40
Triglycerides, mmol /l	0.91	0.8

Subsequent tests were taken at the local clinic

The patient was prescribed the following therapeutic and health-improving therapy: to correct water-electrolyte balance: Potassium chloride + Magnesium sulfate (intravenously by drip); to improve myocardial metabolism: Thiozol (intravenously); for hypotensive purposes: Losara H (per os); For anticoagulant purposes: Eliquis (per os); In order to improve the metabolic properties of the myocardium: Triductan (per os);

The patient tolerated the therapy well. No side effects were observed during the therapy.

Additionally, she was examined by a vascular surgeon (from 04/24/2024) Ds: Nonspecific aortoarteritis? Stenosis of the iliac artery. Occlusion of the superficial femoral artery. Sup . Stump of the left thigh.

The diagnosis was **Main:** Hypertension stage II. Arterial hypertension 1 degree. Risk 4 (very high) (I 11) **ICD-10** .

Concomitant

Chronic congestive cholecystitis (K 81.1). SPO resection of 2/3 of the stomach. SPO amputation of the left lower limb at the level of the middle third of the thigh, 2nd toe of the right foot (2022). Leriche syndrome.

Heart rhythm study, "Electrocardiogram" (ECG) (from 04/17/2024) Sinus rhythm, heart rate 81-90 beats per minute. EAH - normal. EPH - vertical. Metabolic changes in the myocardium.

from 04.11.2024 Sinus rhythm, heart rate 82 beats per minute. EAH - normal. EPH - vertical. Moderate metabolic changes in the myocardium.

"Echocardiography" (from 18.04.2024) Conclusion: - The shape, size and ratio of the chambers of the heart are within normal values. The overall contractility of the left ventricle is not reduced. The heart valves are normal, their kinetics are not impaired. The diastolic function of both ventricles is not impaired. Mitral regurgitation 1st degree

"Liver, gallbladder, pancreas, spleen" (from 04/19/2024) Conclusion: Echo signs of diffuse changes in the liver. Congestive gallbladder. Pneumatosis intestinalis.

X-ray of the chest (from 23.04.2024) Conclusion: - X-ray of the chest: the lungs are straightened. The lung fields are without pathological foci and infiltrates. The pulmonary pattern is unchanged. The roots of the lungs are not dilated, structural. The heart is located in the middle. The sinuses are free. The domes of the diaphragm are clear. Conclusion: The lung fields are without pathological foci and infiltrates.

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As can be seen from the results, our patient had deviations from the general blood test: platelets 418 10^3 /l [180-400], LDL 1.42 mlmol /l (from 2022), 1.40 mlmol /l (from 04/18/2024), PTI - 111% - [80-100] Fibrinogen A - 5.0 - [2.0-4.0] Retraction - 36.7% - [45-65] (from 01/26/2022), PTI - 90% - [80-100] Fibrinogen A - 4.0 - [2.0-4.0] Retraction - 36.7% - [45-65] (from 03/14/2024), given that she had been taking antiplatelet agents anticoagulants, statins for a long time.

Now I would like to say a few words about risk factors.

Moderate coffee consumption is not a risk factor for coronary heart disease [13].

Most studies have shown no association between coronary heart disease and coffee consumption [8, 9, 10]. A 2012 meta-analysis concluded that people who drank moderate amounts of coffee had lower rates of heart failure , with the greatest effect found in those who drank more than four cups per day [12].

A 2014 meta-analysis concluded that cardiovascular diseases such as coronary heart disease and stroke were less likely with three to five cups of decaffeinated coffee per day, but more likely with more than five cups per day. [11].

A 2016 meta-analysis found that coffee consumption was associated with a reduced risk of death in patients who had suffered a myocardial infarction [6].

A 1999 review found that coffee does not cause stomach upset but may contribute to gastrointestinal reflux. [5].

Drinking coffee causes an increased release of gastric juice and the hormone gastrin. Therefore, the most frequently reported effect of coffee is heartburn. Depending on the degree and duration of reflux, reflux esophagitis may also develop. In any case, caffeinated coffee stimulates the production of gastric juice and contraction of the gallbladder. [6]. A research team of members of the Institute of Nutritional Physiology and Physiological Chemistry, Department of Chemistry, University of Vienna and the German Institute for Nutrition Research in Potsdam- Rehbrücke studied the production of gastric acid during coffee consumption. They found that the level of gastric acid production is regulated by the bitterness of coffee. Bitter receptors are found in various places in the digestive tract, such as the stomach and mouth . The receptors in the mouth cause the bitter taste. If only the receptors in the stomach are activated, this leads to increased gastric acid production. On the other hand, activation of the receptors in the mouth leads to a decrease in gastric juice production [7].

The effects of smoking on the heart and circulation

According to WHO, even smoking 1 cigarette a day contributes to the development of vascular atherosclerosis by 10%. The risk of developing cardiovascular disease for a smoker is 2-4 times higher than for a non-smoker. Cardiovascular diseases are the leading cause of death worldwide.

Nicotine also contributes to fatty degeneration of the heart muscle, reducing the heart's performance. Often, excessive smoking causes dizziness and vomiting, which are explained by spasm of the cerebral vessels. Smoking is the main cause of another very serious vascular disease of the lower extremities - intermittent claudication. This disease is associated with obliterating endarteritis of the arteries of the lower extremities, which can lead to gangrene (necrosis) of the foot, shin and often requires their amputation [2].

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So, our patient consumed more than 5 cups a day, i.e. this already speaks of its negative impact on the body, which affected the development of organ ischemia, in particular, decreased blood flow in the vessels of the lower extremities and pelvic organs.

Conclusions

Thus, risk factors such as tobacco abuse and black coffee contributed to the development of Leriche disease at such an early age, resulting in a deterioration in quality of life, decreased ability to work, and subsequent development of disability.

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