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## **MANAGEMENT OF A PATIENT WITH ATHEROSCLEROSIS AND ARTERIAL HYPERTENSION COMORBID WITH AN ASYMPTOMATIC PANCREATIC PSEUDOCYST ON THE EXAMPLE OF CLINICAL CASE**

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Management of patients in therapeutic practice is becoming serious difficulties in view of the large prevalence of comorbidity pathologies of various organs and systems, especially atherosclerosis and arterial hypertension since these diseases is epidemic in recent years. Pancreatic pseudocyst is a localized fluid collection that is rich in amylase and other pancreatic enzymes and its presentation can be ranged from asymptomatic process to major abdominal catastrophe due to complications like infections, hemorrhages, obstruction and rupture. The main difficulty in the management of patients with pancreatic pseudocysts is a lack of effective medical and surgical treatment. Success can only be achieved with an individual approach to the patient with the joint cooperation of doctors of various profiles, as shown by our clinical case.

**KEY WORDS:** arterial hypertension, atherosclerosis, pancreatic pseudocyst, management

## **ВЕДЕННЯ ПАЦІЄНТА З АТЕРОСКЛЕРОЗОМ І АРТЕРІАЛЬНОЮ ГІПЕРТЕНЗІЮ КОМОРБІДНИМИ З БЕЗСИМПТОМНОЮ КІСТОЮ ПІДШЛУНКОВОЇ ЗАЛОЗИ НА ПРИКЛАДІ КЛІНІЧНОГО ВИПАДКУ**

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Лікування хворих в терапевтичній практиці має серйозні труднощі через велику поширеність коморбідної патології різних органів і систем, особливо атеросклерозу і артеріальної гіпертензії, бо ці захворювання мають характер епідемії в останні роки. Кіста підшлункової залози представляє собою локалізований збір рідини, багатой на амілазу та інші панкреатичні ферменти, а клінічна картина може змінюватись в діапазоні від безсимптомного процесу до великої абдомінальної катастрофи через такі ускладнення, як інфекції, кровотечі, непрохідність і розриви. Основні труднощі в лікуванні пацієнтів з панкреатичною псевдокістою полягають у відсутності ефективного медичного та хірургічного лікування. Успіх може бути досягнутий тільки при індивідуальному підході до пацієнта при спільній співпраці лікарів різних профілів, як показано на нашому клінічному випадку.

**КЛЮЧОВІ СЛОВА:** артеріальна гіпертонія, атеросклероз, кіста підшлункової залози, ведення

## **ВЕДЕНИЕ ПАЦИЕНТА С АТЕРОСКЛЕРОЗОМ И АРТЕРИАЛЬНОЙ ГИПЕРТЕНЗИЕЙ КОМОРБИДНЫМИ С БЕССИМПТОМНОЙ КИСТОЙ ПОДЖЕЛУДОЧНОЙ ЖЕЛЕЗЫ НА ПРИМЕРЕ КЛИНИЧЕСКОГО СЛУЧАЯ**

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Лечение пациентов в терапевтической практике имеет серьезные трудности из-за большой распространенности коморбидной патологии различных органов и систем, особенно атеросклероза и артериальной гипертензии, потому как эти заболевания имеют характер эпидемии в последние годы. Киста поджелудочной железы представляет собой локализованный сбор жидкости, богатой амилазой и другими панкреатическими ферментами, а клиническая картина может меняться в диапазоне от бессимптомного процесса до большой абдомінальної катастрофы из-за таких осложнений, как

инфекции, кровотечения, непроходимость и разрывы. Основные трудности в лечении пациентов с панкреатической псевдокистой заключаются в отсутствии эффективного медицинского и хирургического лечения. Успех может быть достигнут только при индивидуальном подходе к пациенту при совместном сотрудничестве врачей разных профилей, что и показано в нашем клиническом случае.

**КЛЮЧЕВЫЕ СЛОВА:** артериальная гипертония, атеросклероз, киста поджелудочной железы, ведения

## INTRODUCTION

Management of patients in therapeutic practice is becoming serious difficulties in view of the large prevalence of comorbidity pathologies of various organs and systems. This question is particularly relevant for patients with atherosclerosis and arterial hypertension since these diseases is epidemic in recent years [1–2].

Pancreatic pseudocyst is a localized fluid collection that is rich in amylase and other pancreatic enzymes and is surrounded by a wall of fibrous tissue that is not lined by epithelium [3].

Clinical presentation of this condition can be ranged from asymptomatic process [4] to major abdominal catastrophe due to complications like infections, hemorrhages, obstruction and rupture [5–7].

The main difficulty in the management of patients with pancreatic pseudocysts is a lack of effective medical and surgical treatment [8]. Success can only be achieved with an individual approach to the patient considering comorbidity with the joint cooperation of doctors of various profiles, as shown by our clinical case [9–10].

## OUR CASE

**Passport data:** Male, 75 years old, retired.

**Complaints:** Transient rise of blood pressure to 170/90 mm Hg without any clinical manifestations. Shortness of breath during climbing to the 4th floor. Edema of the legs, prominently in the right.

**History of the disease:** Arterial hypertension since 1976 with the highest figure of blood pressure 240/120 mm Hg, the usual blood pressure is 150–160/80–90 mm Hg. Since 2000 were registered atherosclerotic lesions of cardiac valves on ultrasound investigation of the heart. Repeatedly treated in outpatient and inpatient clinic, last hospitalization in 2012. The present deterioration occurred during several months. At the moment took amlodipine.

**History of the life:** Peptic ulcer disease since 1995, twice history of gastrointestinal bleeding, last in December 2010. Diabetes mellitus, tuberculosis and infectious disease are denied. The patient smoked earlier for 20 years, has not smoked since 1972. Denied any allergies.

**Somatic status:** active position. Skin in usual characteristics. Peripheral lymph nodes were not enlarged. The thyroid gland is not clearly determined. Muscular-skeletal system without special features. Vesicular sounds during lung percussion. On lung auscultation is vesicular breathing. Rhythmic activity of the heart. Heart tones are muted. Pulse 65 min. Blood pressure on both arms on the background of antihypertensive therapy is 150/90 mm Hg. Abdomen: normal size, soft, painless. In the left iliac region a dense painless formation with a diameter of about 10 cm was palpated, localized practically below the left hypochondria, it descends into minor pelvis (swollen bowel loops? formation?). Liver is at the edge of the costal arch, painless. Physiological functions without special features. A sign of costovertebral angle tenderness is negative on both sides. Swelling of the right lower leg, no edema on the left.

**Plan of survey:** full blood count, urinalysis, biochemical test of blood (common cholesterol, bilirubin, AlAT, AsAT, fasting plasma glucose, creatinine, urea, potassium, sodium), chest X-ray, ECG, ultrasound of the heart, 24-hours daily monitoring of ECG and blood pressure, ultrasound and/or computer tomography of the abdomen, ultrasound of lower extremities vessels, test with dosed physical activity, interdisciplinary consultation with other specialist doctors when it needs.

## RESULTS OF THE SURVEY

**Full blood count:** All figures are in the normal range.

**Urinalysis:** All figures are in the normal range.

**Biochemical test of blood:** Hypercholesterolemia due to LDL.

**Chest X-ray:** Focal and infiltrative changes of the lungs are not detected. The roots are structural, not expanded. The sinuses are free. Aperture clearly delineated. Pleuropericardial left cord was extended, calcification of the valve. Aortic sclerosis. Determined expansion of the upper mediastinum.

**ECG:** Sinus rhythm, right, heart rate 52 beats/min. Left ventricle hypertrophy.

**Ultrasound of the heart:** Sclerotic changes of the aorta wall, leaflets of aortic and mitral valves. Left ventricle hypertrophy. Ejection fraction is 60 %.

**24-hours daily monitoring of ECG and blood pressure:** During all observation time on the background of sinus rhythm with a mean heart rate 67 beats/min single supraventricular and ventricular premature beats was registered. Ischemic ECG changes were not recorded. Figures of systolic and diastolic blood pressure during the entire period of observation were characterized by normotension.

**Test with dosed physical activity:** Presence of formation of the abdominal cavity with unknown etiology is a relative contraindication for this test, so the procedure was not performed.

**Ultrasound of lower extremities vessels:** Deep vein at the current studies without evidence of thrombosis, phlebitis and valvular insufficiency. Varicose of saphenous veins of right leg. Incompetency of perforating vein of the right shin. Moderate expansion of veins on both calves.

**Vascular surgeon:** Primary varicose veins of right lower limb, chronic venous insufficiency of stage 2, recommended surgical treatment.

**Ultrasound of the abdomen:** Diffuse changes in the liver parenchyma, diffuse changes in pancreas parenchyma, diffuse degenerative changes in both kidneys, cysts of both kidneys. Pathological formation of abdomen with heterogeneous liquid volume of about 2 liters. (pseudocyst? cyst? formation? megacolon?).

**Computer tomography of the abdomen:** CT features are more typical for the pseudocyst of pancreas tail.

**Interdisciplinary consultation with other specialist doctors:** The patient was examined by therapists, abdominally surgeon, oncologist, gastroenterologist, endocrinologist and doctor of functional diagnostics together. Given the results of the physical examination and imaging

studies, the patient was set with diagnosis giant pseudocyst of the tail of the pancreas. Given the high risk of complications, it was decided to perform drainage of the cavity of the pseudocyst with

## CLINICAL DIAGNOSIS

Atherosclerosis of aorta. Arterial hypertension 3 degree. Heart failure 1 functional class by NYHA. Moderate additional cardiovascular risk. Peptic ulcer disease in remission phase. Primary varicose veins of right lower limb, chronic venous insufficiency 2 stage. Giant pseudocyst of the pancreas (?).

## RECOMMENDATIONS

- Modification of lifestyle (diet, regular physical activity);
- Amlodipine 5 mg in the morning under the control of BP;
- Lisinopril 10 mg in the evening under the control of BP;
- Atorvastatin 20 mg in the evening under the control of lipid profile and AlAT;
- Hospitalization to the surgical department for operative treatment.

## OPERATIVE TREATMENT

One week later patient was admitted to the surgical department for planned surgical treatment of supposed pancreatic pseudocyst.

Considering location of the pseudocysts in the abdomen cavity, the patient's age, concomitant diseases of other organs and systems, it was decided to perform laparoscopic surgery with followed drainage.

**Clinical diagnosis after surgical treatment:** Giant pseudocyst of pancreas. Drainage of pseudocyst cavity. Residual fluid volume – 25 ml. Atherosclerosis of aorta. Arterial hypertension 3 degree. Heart failure 1 functional class by NYHA. Moderate additional cardiovascular risk. Peptic ulcer disease in remission phase. Primary varicose veins of right lower limb, chronic venous insufficiency 2 stage.

## FOLLOW-UP IN 1 MONTH AFTER SURGERY

**Complaints:** none.

**Somatic status:** active position. Skin in usual characteristics. Peripheral lymph nodes were not enlarged. The thyroid gland is not clearly determined. Muscular-skeletal system without special features. Vesicular sounds during lung percussion. On lung auscultation is

vesicular breathing. Rhythmic activity of the heart. Heart tones are muted. Pulse 67 per min. Blood pressure on both arms on the background of antihypertensive therapy is 125/75 mm Hg. Abdomen: normal size, soft, painless. In the left iliac region a dense painless formation with a diameter of about 7 cm is palpated, localized practically below the left hypochondria. Liver is at the edge of the costal arch, painless. Physiological functions without special features. A sign of costovertebral angle tenderness is negative on both sides. Swelling of the right lower leg, no edema on the left.

**Plan of survey:** ultrasound of the abdomen, interdisciplinary consultation with other specialist doctors when it needs.

### RESULTS OF THE SURVEY

**Ultrasound of the abdomen:** Diffuse changes in the liver parenchyma, diffuse changes in pancreas parenchyma, diffusive degenerative changes in both kidneys, cysts of both kidneys. Giant pseudocyst of pancreas with liquid volume of about 2 liters.

**Interdisciplinary consultation with other specialist doctors:** The patient was examined by therapists, abdominally surgeon, oncologist, gastroenterologist, endocrinologist and doctor of functional diagnostics together. Considering relapsing course of pancreatic pseudocyst with an absolute absence of symptoms, it was decided to choose expectant management. It was recommended to perform of computer tomography of the abdomen every 6 months in the absence of symptoms of the abdominal cavity and immediately get medical attention in case of any discomfort in the abdomen.

### CLINICAL DIAGNOSIS

Atherosclerosis of aorta. Arterial hypertension 3 degree. Heart failure 1 functional class by NYHA. Very high additional cardiovascular risk. Peptic ulcer disease in remission phase. Primary varicose veins of right lower limb, chronic venous insufficiency 2 stage. Giant pseudocyst of pancreas, drainage of pseudocyst cavity, residual fluid volume – 25 ml. Relapse of giant pseudocyst of pancreas.

### RECOMMENDATIONS

- Lifestyle modification and drug therapy in accordance with previous recommendations;
- Perform of computer tomography of the abdomen every 6 months in the absence of symptoms of the abdominal cavity;
- Immediately get medical attention in case of any discomfort in the abdomen.

### CONCLUSIONS

Management of patients with comorbid a disorder has not yet been standardized and is interdisciplinary problem at the junction of various medical specialties.

Our patient belongs to the very high additional cardiovascular risk in mind the presence of hypertension and atherosclerosis, which can greatly complicated during anesthesiological procedures and carrying out abdominal surgery for pancreatic pseudocyst [1–2, 8].

We have taken a wait and see tactics, and apparently made no mistake. Within 2 years we are committed telephone and ambulatory visits with CT control of pseudocyst state every six months, the negative dynamics is still not fixed, any subjective symptoms are also still missing.

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