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## POLYMORBIDITY IN CLINICAL PRACTICE

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The interaction of diseases for their clinical features, severity type, quality of life of patients and preferable drug therapy are reviewed on the example of clinical case. Clinical examination, diagnosis and choice of optimal drug management are outlined in patient with polymorbid pathology.

**KEY WORDS:** polymorbidity, geriatriya, drug therapy, quality of life

## ПОЛІМОРБІДНІСТЬ В КЛІНІЧНІЙ ПРАКТИЦІ

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На прикладі клінічного випадку розглядається взаємовплив захворювань на їх клінічну картину, характер течії, якість життя пацієнтів та вибір лікарської терапії. Викладені діагностика, постановка клінічного діагнозу та вибір оптимальної медикаментозної терапії у пацієнтки з поліморбідною патологією.

**КЛЮЧОВІ СЛОВА:** поліморбідність, геріатрія, медикаментозна терапія, якість життя

## ПОЛИМОРБИДНОСТЬ В КЛИНИЧЕСКОЙ ПРАКТИКЕ

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На примере клинического случая рассматривается взаимовлияние заболеваний на их клиническую картину, характер течения, качество жизни пациентов и выбор лекарственной терапии. Изложены диагностика, постановка клинического диагноза и выбор оптимальной медикаментозной тактики у пациентки с полиморбидной патологией.

**КЛЮЧЕВЫЕ СЛОВА:** полиморбидность, гериартрия, медикаментозная терапия, качество жизни

Polymorbidity is an actual problem in geriatric practice [1, 2, 3]. Clinical examination of elderly and old patients is often diagnosed at least 4-5 diseases [3, 4].

Atherosclerotic vascular lesions of heart and brain, hypertension, emphysema, chronic gastritis with secretory insufficiency, diabetes, osteochondrosis, arthritis, diseases of the eye (cataracts, glaucoma), and others are observed most often in different combinations and varying degrees of clinical symptoms [4, 5, 6].

Currently, there are many regimens for treatment of comorbid conditions, however,

patients compliance to treatment remains low [7, 8, 9, 10].

The aim of the article is to highlight the importance of polymorbidity in elderly patients with their compliance to drug therapy.

### CLINICAL CASE

Woman, 75 years old, retired, resident of the city.

### COMPLAINTS

Complained of rare pressing pain behind the breastbone during moderate physical and

emotional stress, without irradiation, stopped taking 1 tab. nitroglycerin; transient increase in blood pressure to 150/80 mm Hg, accompanied by headache in the neck, stopped by medication (captopres or anaprilin), periodic heartbeat with heart rate over 100 beats/min., appearing without a clear connection with the provoking factors and accompanied by shortness of breath; moderate shortness of breath when walking up to 15-20 m, stopped by rest; swelling of the lower third of legs in the evening, held in the morning after sleep; numbness fingertips on both feet, pain in the calf muscles when walking up to 50 m.

### **ANAMNESIS MORBI**

Since 1990 fluctuations in blood pressure with the rise to 150-170/80 mm Hg (usual BP - 140/80 mm Hg) were marked, in the autumn of 2007 - ischemic heart disease (IHD), angina pectoris functional class (FC) III, obliterating atherosclerosis of the lower extremities due to insulin-dependent type 2 diabetes, since 2013 paroxysmal atrial fibrillation (AF). Repeatedly treated inpatient, outpatient, constantly taking nitrates, beta-blockers, aspirin, insulin. In November 2008 right femoropopliteal bypass was conducted for obliterating atherosclerosis of the arteries of the lower extremities. The patient was treated repeatedly for angina FC III-IV, paroxysmal AF, out takes antianginal drugs without full effect. In 2009 renal artery bypass surgery was performed, in 2010 - covered stenting (4 covered stents in the left anterior descending (LAD), the diagonal branch (I DB), the circumflex branch (CB)) of the coronary arteries, in 2011 - stent plastic in LAD, in 2012 - stenting of one of the branches of coronary arteries, unspecified. The patient was hospitalized in the clinic in connection with an increase in heart attacks.

### **ANAMNESIS VITAE**

The patient has two children. 40 years of experience teaching, 20 years - the director of the school. In 1963 suffered encephalitis. Since 1972 diagnosed with insulin-dependent type 2 diabetes mellitus (1972-1974 - took maninil 5-10 mg/day, since 1974 insulin (24 units/day Actrapid HM, 24 units/day Lantus). In 1980 - hysterectomy, appendectomy, removal of atheroma on the right hand, 2009 - phacoemulsification in both eyes, surgery for retinal detachment, osteochondrosis of L3-L4, L4-L5, L5-S1, osteoarthritis of the right

shoulder and knee joints unidentified ago. The patient denies viral hepatitis, tuberculosis, sexually transmitted diseases. Allergic anamnesis is not burdened. Patient does not have bad habits. Family history was not burdened by coronary artery disease and hypertension

### **OBJECTIVE EXAMINATION**

The patient's condition is satisfactory, active, height - 156 cm, weight - 65 kg, body mass index (BMI) = 26.7 kg/m<sup>2</sup>. Skin has pale pink color. Peripheral lymph nodes: submandibular, axillary and inguinal lymph nodes soft consistency, painless, moderately agile and not soldered to each other and the skin. Lobes of the thyroid gland are not palpable, the isthmus is palpated in the form of a uniform cross-strand smooth, 1 cm wide. Musculoskeletal system is without singularities, pain in the lumbosacral palpation. Above lungs the mild lung sound, weakened vesicular breathing in the lower parts in auscultation. Border of the heart expanded to the left, activity of the heart is rhythmic, tachycardia (heart rate (HR) 95 beats/min). Heart sounds are muffled, II tone accent on the aorta. Diffuse systolic murmur, with its epicenter in the aorta. BP is 140/80 mm/Hg on hypotensive therapy. Abdomen is normal sized, sensitive to palpation. Liver is at the costal margin, painless. Physiological functions: a tendency to constipation. Effleurage symptom on the lumbar region is negative on both sides. Auscultation of vessels is normal. Swelling is at lower third of the leg in the evening.

### **LABORATORY AND INSTRUMENTAL TESTS**

Clinical analysis of blood and urine are normal.

According to the biochemical analysis of blood - creatin 101.5 mmol/l (normal 53 - 97 mmol/l), blood glucose - 10.39 mmol/l (4.2 - 6.1 mmol/l), creatin clearance using the formula Cockcroft - Gault = 52 ml/min ( $\geq$  90 ml/min); lipid profile within the normal range.

ECG from 29/09/14: atrial flutter, tachysystolic form with carrying out 2:1, heart rate = 111 beats/min. Signs of left ventricular hypertrophy. Violation of repolarization is in the anterior-posterior-lateral parts of the left ventricle.

According to the ultrasound of the heart from 10/01/14: sclerotic changes of the aortic wall, fibrosis and calcification of the aortic and mitral valves, aortic valve stenosis. Mild mitral valve stenosis. Left ventricular hypertrophy, concentric type. Dilatation of both atria. Tricuspid regurgitation II stage. Left ventricular injection fraction – 55 %.

Chest X-ray: signs of venous hypertension. Diffuse fibrosis. Roots structurally enhanced by the vascular component. Right sinus is obliterated. Heart is aortic configuration, extended to the left. Aorta in arc is sclerotic.

Ultrasound of abdominal and retro-abdominal organs: diffuse changes of liver and pancreas parenchyma without magnification. Cholesterosis of gallbladder. Microcalculosis of kidneys. Right hydrokalkosis.

X-ray of lumbosacral spine and pelvis: diffuse osteoporosis, left-sided scoliosis, osteochondrosis of L5-S1 with spondyloarthrosis, deforming spondylosis, fragmented calcification of blood vessels. Degenerative-dystrophic changes in the hip joints due to osteoporosis.

## DIAGNOSIS

*The underlying disease:* Systemic atherosclerosis (atherosclerosis of aorta, aortic stenosis, coronary atherosclerosis, atherosclerotic mild mitral stenosis, atherosclerosis of kidneys arteries (renal artery bypass surgery (2009)), pelvic arteries and the arteries of the lower extremities (femoral-popliteal bypass-tibial segment vessels right lower extremity (2008)). IHD: stable exertional angina FC III. Eluting stenting of the LAD, the I DB, the CB of the coronary arteries (5 stents, 2010-2012). Isolated systolic hypertension III stage, soft degree. High additional risk. Persistent AF, atrial flutter, tachysystolic form. HAS-BLED

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score is 2, CHA2DS2-VASC score is 6. CHF IIA stage with preserved left ventricular pump function (injection fraction = 55 %), III FC.

*Comorbid conditions:* Phacoemulsification in both eyes, surgery for retinal detachment (2009). Overweight (BMI = 26.7 kg/m<sup>2</sup>). Insulin-dependent type 2 diabetes mellitus, subcompensation stage, average severity. Irritable bowel syndrome with constipation predominance. Chronic kidney disease stage 3. Chronic pyelonephritis, remission. Osteoarthritis, polyosteoarthrosis of right shoulder, double-sided gonarthrosis, activity 0, Ro III. Osteochondrosis of the lumbar spine. FJD I stage.

## RECOMMENDATIONS

Lifestyle modification with dietary interventions based on comorbid pathology, physiotherapy.

Rosuvastatin 20 mg 1 time per day, Isosorbide mononitrate 50 mg 1 time per day, nitroglycerin (tablet or spray) on demand, ramipril 5 mg 1 time per day before sleeping under the control of blood pressure, amiodarone 200 mg per day under the control of HR, dabigatran 110 mg 2 times per day, torasemide 5 mg by the scheme in the morning before a meal, insulin short and prolonged action by the scheme.

On the background of optimally chosen therapy the patient's condition has stabilized, marked improvement of hemodynamic parameters.

## CONCLUSIONS

Clinical case demonstrated that the optimal choice of the minimal medical therapy and adequate lifestyle modification will allow to the patient stabilize the condition and achieve better quality of life.

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