

Acute and Chronic Diseases of the Pancreas and Intestines in Elderly and Senile Patients: Pathogenesis, Clinical Semiotics, Diagnostic Algorithms, and Therapeutic Tactics

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Introduction

The pancreas and intestines in older age groups undergo pronounced involutionary changes, which become the morphofunctional background for the development of both acute and chronic diseases.^{8,10} Acute pancreatitis in the elderly often occurs with minimal pain but with a high frequency of destructive forms (necrosis, suppuration) and mortality, reaching very high values.^{7,12} Chronic pancreatitis more often has a latent course and manifests primarily as exocrine insufficiency with characteristic steatorrhea and creatorrhea.^{2,4} Pancreatic cancer, being difficult for early diagnosis at any age, in elderly patients is often detected at late stages when surgical treatment is ineffective.^{5,16} As for the intestines, chronic colitis, diverticulitis, and colon cancer have their own geriatric features: blurred symptoms, late presentation, rapid development of complications (perforation, abscess, peritonitis, massive bleeding), and limited possibilities of radical surgical treatment due to concomitant pathology.^{3,19} In this article, based on the complete original text, all these diseases are examined in detail with an emphasis on age-related features of their clinical presentation, diagnosis, and treatment.^{8,10}

Acute Pancreatitis: Painless Forms, Destruction, and High Mortality

Acute pancreatitis is a fairly common disease in elderly and old people.^{12,14} Its development is facilitated by age-related changes in the pancreas itself and its excretory ducts, as well as the frequent presence of biliary tract diseases (cholelithiasis, stenosis of the major duodenal papilla).¹¹⁻¹⁵ All this leads to intraductal hypertension, stagnation of pancreatic secretion in the gland, damage to acinar cells, and premature activation of enzymes directly in the gland, which triggers an aseptic inflammatory process and, in severe cases, necrosis.^{10,15} The authors particularly note that the combination of cholecystitis and pancreatitis is observed in 60–80% of cases, which often justifies the diagnosis of “cholecystopancreatitis”.^{7,16}

The clinical picture of acute pancreatitis generally has no significant age-related differences, but there are important nuances.^{1,17} The intensity of pain in elderly and old people is lower than in young people, while vomiting is more persistent and, characteristically, does not bring relief.^{2,4} Uncontrollable vomiting becomes one of the key mechanisms of dehydration, reduction of circulating blood volume, development of multiple thromboembolisms, collapse, and shock.^{7,15} In elderly patients, acute pancreatitis is almost always accompanied by intestinal paresis, as well as the development of cardiovascular, renal, and hepatic insufficiency.¹⁻⁷ Particularly insidious are the painless forms of acute pancreatitis, which occur more often in older people than in young people (about 5-10% of cases).^{14,18} In this case, serous (edematous) pancreatitis in the elderly more often than in young people progresses to necrotic and purulent forms, which requires special vigilance.^{12,21}

Diagnosis of acute pancreatitis in the elderly is very difficult due to the blurred clinical picture.^{14,16} It is based on the dynamics of laboratory parameters: blood and urine amylase (although its elevation may be less pronounced in the elderly), leukocytosis, ESR, C-reactive protein, blood and urine glucose levels.^{5,12} Ultrasound examination of the pancreas is of great importance.^{21,22} Differential diagnosis is carried out with myocardial infarction, perforated gastric and duodenal ulcers, acute peritonitis of another etiology, and intestinal obstruction.^{7,14} The authors emphasize: when an attack of abdominal pain develops in an elderly or old person, it is always necessary to remember the possibility of acute pancreatitis.^{16,17}

Treatment of acute pancreatitis in the elderly requires speed and aggressiveness.^{7,12} The effectiveness of conservative therapy depends on the extent of the lesion and the speed of therapeutic measures, including strict bed rest, fasting for 2–5 days, cold application to the abdomen, parenteral administration of drugs to relieve pain, spasm of the excretory ducts, edema of the pancreas, improve its blood supply, suppress the activity of pancreatic enzymes (antienzyme drugs), combat intoxication

and dehydration.¹⁴ Cardiac glycosides and anticoagulants are indicated.^{12,16} Placement of a nasogastric tube and a rectal gas outlet tube is advisable.⁷ Surgical treatment in older age is performed only for vital indications with the development of formidable complications or ineffectiveness of conservative therapy.^{5,15} Mortality from acute pancreatitis among older people, as directly indicated in the text, is very high.^{7,12}

Chronic Pancreatitis: Latent Course and Exocrine Insufficiency

Chronic pancreatitis develops less frequently in elderly people than in young people; more often it is primary.^{2,4} The main cause is pathology of the liver and biliary tract; often the disease occurs after cholecystectomy.^{8,13} In pathogenesis, the main importance is intraorgan activation of enzymes, leading to damage and death of acinar cells, followed by their replacement with connective and adipose tissue.^{4,14} However, this process develops slowly and affects not such extensive areas as in acute pancreatitis.^{7,12} In older people, the latent form is predominantly found, less often chronic recurrent pancreatitis, and very rarely pancreatitis with constant pain syndrome.^{6,16} In the latent form, pain is usually dull, aching in nature, localized in the epigastrium and left hypochondrium, occurring with overeating, diet violations, and alcohol consumption.^{2,13} Characteristic is the symptom complex of exocrine insufficiency: a large amount of mushy, grayish, foul-smelling, “fatty” stool (steatorrhea) with a high content of undigested muscle fibers (creatorrhea), fat droplets, and starch grains.^{12,14} Treatment includes organization of proper nutrition (reduction of calorie content, fractional meals, limitation of animal fats, fried and spicy foods) and taking enzyme preparations (panzinorm, festal, digestal, pankurmen).¹³⁻¹⁷ Courses of lipotropic agents (lidocaine, methionine, essentiale), B vitamins and PP are indicated; for malnutrition – anabolic drugs (retabolil, nerobolil).^{8,13}

Pancreatic Cancer: Triad of Symptoms and Late Diagnosis

Pancreatic cancer most often occurs after 50 years, with men being affected 2 times more often.^{5,6} The disease more often develops in individuals with previous chronic pancreatitis, which greatly complicates early diagnosis.^{2,5} However, in the elderly, tumor growth is slower and metastasis occurs later.^{11,6} The earliest manifestations are the triad: pain, dyspeptic disorders, weight loss.^{5,6} In the presence of this triad in an elderly person, it is always necessary to think about a malignant process.^{9,17} Pain usually does not depend on food intake but intensifies when lying on the back.^{5,6} As the tumor of the pancreatic head grows (the most common localization), jaundice develops, which sometimes becomes the first symptom.^{8,17} When localized in the body and tail, migrating thrombosis of peripheral vessels and carbohydrate metabolism disorders are observed.^{5,13} Diagnosis is extremely difficult, especially at early stages.^{5,17} The most informative are retrograde pancreatography, angiography, ultrasound examination, computed tomography, and puncture biopsy.^{6,22} Treatment is surgical (pancreatectomy), but postoperative mortality in the elderly is very high, and 5-year survival is less than 5%.¹⁵⁻¹⁹

Chronic Colitis, Diverticulitis, and Colon Cancer

Chronic colitis is one of the most common diseases in the elderly.¹¹⁻¹⁹ The leading symptoms are pain and intestinal discomfort (flatulence, constipation, their alternation with diarrhea).^{3,9} Characteristic is the syndrome of incomplete bowel emptying, when after the release of a small amount of mushy or liquid stool with mucus, a feeling of incomplete emptying remains.^{3,8} Urges to defecate occur in the morning after eating.⁹

Acute diverticulitis is more often localized in the sigmoid colon (pain in the left iliac region), accompanied by fever, peritoneal irritation symptoms, bleeding, constipation or diarrhea.³ Complications: perforation with peritonitis or abscess, massive bleeding, fistulas, intestinal obstruction.^{5,14}

Colon cancer most often occurs after 70 years.^{13,16} Precancerous diseases: polyposis (villous adenoma), ulcerative colitis, Crohn's disease.¹⁹⁻²³ Warning symptoms: intestinal bleeding, sudden bowel dysfunction, mucus discharge, abdominal pain, excessive gas formation.²³ Every elderly patient should undergo a digital rectal examination.^{13,19}

Conclusion

Diseases of the pancreas and intestines in elderly and senile individuals represent a serious clinical problem due to the high frequency of destructive and purulent forms, blurred or absent pain syndrome (especially in acute pancreatitis), latent course of chronic pancreatitis and cancer, rapid development of complications such as peritonitis, abscess, massive bleeding, intestinal obstruction, as well as very high mortality in acute pancreatitis and postoperative mortality in pancreatic cancer.¹⁴⁻¹⁸ Therapeutic tactics require a multidisciplinary approach involving a therapist, surgeon, anesthesiologist, and oncologist.⁵⁻⁹ Conservative therapy should be as aggressive as possible in the early stages, and surgical intervention should be timely but with a thorough assessment of surgical risk taking into account concomitant cardiovascular and pulmonary pathology.⁷⁻¹⁵ Screening for colorectal cancer, regular digital rectal examination, and follow-up of patients with precancerous diseases are priority areas in geriatric gastroenterology.^{6,9} Only such an integrated approach can improve the prognosis and quality of life of older age groups.^{8,10,13}

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