

Features of eating behavior in patients with chronic pancreatitis

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Introduction: The main reason for the development of chronic pancreatitis are eating disorders and eating behaviour disorders. One of the current areas is the study of eating behaviour disorders (EBD) such abnormalities in food consumption, which are not a disease, but are risk factors for various pathologies, including chronic pancreatitis. Unlike eating disorders, EBD can be successfully corrected by gastroenterologists without the involvement of compatible specialists (psychologists and neurologists).

Purpose: To investigate the features of EBD in patients with chronic pancreatitis depending on the indicators of body mass index (BMI).

Materials and methods: The study involved 68 patients with chronic pancreatitis: 49 women and 19 men. The average age of the studied 56 [48; 62] years. Body mass index (BMI) was determined as a criterion for the physical indicator of EBD: from 18.5 to 25 kg / m² - norm, from 25 - 30 kg / m² - overweight, more than 30 kg / m² - obesity. The control group consisted of 32 reciprocal patients by age and sex with normal BMI. EBD disorders were studied using the Dutch Eating Behavior Questionnaire (DEBQ). Actual nutrition (AN) was investigated using an additional questionnaire.

Results: The average BMI in the study group was 24 [18.2; 36.1] kg / m². The group of subjects included persons mainly with normal BMI - 75.0% (n = 51). Only 10.3% (n = 7) were underweight and 14.7% (n = 10) were overweight. The DEBQ questionnaire allowed to identify the following of EBD: restrictive, emotional and external. Despite the fact that most of the subjects had a normal BMI, the number of people with EBD was 85.3% (n = 58) of the total number of subjects. According to the types of EBD, the subjects were divided: restrictive was diagnosed in 24.1% (n = 14), emotional - in 19.0% (n = 11) and external - in 13.8% (n = 8). Overweight patients had restrictive and external types of EBD (71.4% and 28.6%, respectively). AN differed in each type of EBD. For patients with the external type often abused fatty, fried foods and red meat (p < 0.05), in the restrictive - light carbohydrates (p < 0.05) and ate vegetables less than 100 g / day (0.05), with emotional - had no breakfast and dinner late (p < 0.05), instead of a full lunch had frequent snacks (more than 3 times / day).

Conclusions: Patients with chronic pancreatitis were diagnosed with different types of EBD with a predominance of restrictive type over external and emotional. These data should be taken into account when prescribing individual nutrition and recommendations for patients with chronic pancreatitis.

Peculiarities of pancreatic dysfunction in patients with chronic obstructive pulmonary disease

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Introduction: Comorbidity of chronic obstructive pulmonary disease (COPD) and chronic pancreatitis (CP) leads to a gradual decrease in the exocrine and endocrine function of pancreas (P) and grounds the possibility for insulin resistance and pancreatogenic diabetes mellitus development. That is why early detection of pancreatic dysfunctions in patients with COPD and their correction are very important.

Purpose: Evaluation of pancreatic dysfunctions frequency and character in patients with COPD.

Materials and methods: 44 patients with mild to moderate COPD were examined. The age of patients ranged from 43 to 71 years. The pancreatic function was assessed by the dynamics of alpha-amylase (*aml*) levels in urine at fixed intervals of digestive cycle - on an empty stomach and 30-60 minutes after standard test meals. The debit-levels of *aml* were calculated.

Results: The predominance of pancreatic hyposecretion and changes in the dynamics of amylasuria during the digestive cycle were characteristic. In 23.8% of patients, there was a decrease in the concentrations of urinary *aml* in all periods of digestion, in 59.2% - only in the basal period, in 57.1 and 58.5% - after meals. The secretory response of P to the food stimulus was also low. The higher frequency of low *aml* concentrations compared with its debit levels, may indicate the functional character of changes. It must be noted that progression of bronchial obstruction and clinical severity of COPD was accompanied with a significant decrease in the functional response of P to food stimuli. Metabolic disorders in the form of overweight and obesity were associated with increased secretory activity of P. A relatively high frequency of moderately elevated blood glucose was also detected in 36.4% of respondents, without diagnosed diabetes.

Conclusions: A clear tendency of pancreatic hyposecretion was found in COPD patients. It depended on the severity of bronchial obstruction and clinical severity of the disease and was associated with a high frequency of moderately elevated blood glucose in the third of respondents. Therefore, common pathogenic aspects of pancreatic dysfunctions and COPD, screening of pancreatic secretion is appropriate even in patients with mild disease for early correction of identified disorders and prevention of insulin resistance and pancreatic diabetic diabetes development.

Diagnostics of the prescription of damage to the pancreas in explosive trauma and gunshot wounds during a military conflict

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Introduction: Quite often a pancreatic injury is observed in combination with the injury of other organs of the abdominal cavity during explosive trauma and gunshot wounds during a military conflict.

Purpose: To study the dynamic changes of histological parameters injured pancreas tissues in various types, depending on the period of injury.

Materials and methods: The material for the study included tissues of 52 male and female pancreases, aged from 20 to 54 who died of injury of explosive trauma and gunshot wounds during a military conflict. In the conducted research we used histological and histochemical techniques.

Results: In the thoraco-abdominal trauma with damage to the pancreas, histological examination to 6 hours after the infliction of trauma, damage zone are erythrocytes with clear contours, vessels in the accumulation of leukocytes at sites of hemorrhage leukocytes are diffusely. They begin to appear signs of fat necrosis. After 6-12 hours after the onset of hemorrhage injury in the form of clusters of red blood cells with clear contours, but red blood cells in the center of hemorrhage unclear, a growing number of white blood cells in blood vessels and tissues that concentrate perifocal. Within 12-24 hours erythrocytes represented as granular masses, in place of injured areas appear necrotic tissue. In areas of perifocal inflammation among leukocytes are macrophages, lymphoid cells containing granular pigment. At the 2-3rd day well distinguished demarcation line around parenchymal necrosis and surrounding fat. In this

period also distinct leukocyte infiltration, there is a significant amount of fat necrosis, edema spreads. After 4–6 days after causing injury continues to increase the number of fat necrosis in the zone infiltrates increased number of lymphocytes, macrophages, histiocytes. After the 6th day in the damage zone pancreas begins rejection of necrotic tissue with cellular transformation perifocal infiltration of histiocytic lymphoma.

Conclusions: The study has established regular changes of histological parameters pancreatic tissue depending on the period of causing injury to the time of death, the presence of traumatic illness, etc., to help in solving important for law enforcement agencies on the definition of limitation, the sequence of injury in injured and people died during explosive trauma and gunshot wounds.

How people with pancreatic cancer experience the additional challenges of the COVID-19 pandemic: Preliminary results of an ad hoc analysis from a qualitative research project on coping of people with pancreatic cancer from Germany

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Introduction: Since 2020, healthcare systems worldwide have faced particular challenges due to the COVID-19 pandemic. In some cases, this has a significant impact on patient care. Patients with pancreatic cancer are also directly affected by this, for example, when non-emergency surgeries and medical procedures are postponed.

Purpose: This ad hoc analysis, as part of a larger research project on the disease experience of people with pancreatic cancer, examines the impact of the COVID-19 pandemic on affected people in Germany from a patients' perspective.

Materials and methods: From six problem-centred interviews with people suffering from pancreatic cancer at different stages of the disease conducted in winter 2020/2021, the interview passages that indicated a pandemic context were first open and subsequently axially coded according to the grounded theory methodology of Strauss and Corbin.

Results: The COVID-19 pandemic confronts people with pancreatic cancer with additional changes and challenges on top of those already caused by their disease on a physical, psychological and social level. Affected people reflect on their situation against the background of the pandemic. Whether and to what extent additional challenges are perceived as such depends on two contextual factors:

- the person's perception of limitations or threats posed by the COVID-19 pandemic
- the social environment of the affected person

The strategies and consequences with which the affected persons react to the additional challenges depend significantly on an intervening condition, the "role of the affected person in the partnership". Some are taken care of, and some take care of others. Finally, the previously described components of behaviour lead to two different consequences: Either those affected can gain something positive from the additional challenges - or this effect remains absent, and the adverse effects of the additional challenges predominate.

Conclusions: To some extent, people with pancreatic cancer may also find positive aspects in their current situation influenced by COVID-19. Whether this is the case seems to depend on whether they are cared for or care for others themselves. The phenomenon presented should be interpreted as a snapshot of the situation in the winter of 2020/2021 in Germany. Nevertheless, it shows possible indications for future targeted interventions.

Nutrition in Chronic Pancreatitis: More than just calories!

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Introduction: Chronic pancreatitis (CP) is a fibro-inflammatory disorder of the pancreas resulting in irrevocable damage to endocrine and exocrine functionality leading to malabsorption and malnutrition. Patients typically present with an array of complications including abdominal pain, weight loss, nutrient deficiency, osteoporosis, and diabetes. The dietary intake of those with CP has been poorly studied.

Purpose: We compared dietary intake of patients with CP (> 5 years duration) versus healthy controls.

Materials and methods: Forty patients with CP and 40 healthy controls were recruited, groups were matched for age/gender/BMI/ethnicity. We measured energy (calories), protein, fat, fibre, vitamins (A, B vitamins, C, D, E, K) and micronutrients (sodium, potassium, copper, magnesium, folate) using 3-day food diaries. Dietary analysis was done using Nutritics software (v5.72, Ireland). Clinical and demographic details were recorded including marital status, living conditions, physical activity, employment smoking status and etiology.

Results: Forty percent of CP patients had alcohol-associated CP. Patients with CP were more commonly smokers than controls ($p < 0.001$). Patients with CP were more likely to be unemployed ($p < 0.001$), engaged in low physical activity ($p = 0.04$) and living alone ($p = 0.04$). There was no statistical difference in the overall intake of energy, fat, protein, carbohydrate, vitamins or minerals of CP patients versus controls, with the exception of lower alcohol intake among patients ($p < 0.001$). Patients with alcohol-related CP consumed less fibre ($p = 0.04$), vitamin C ($p = 0.01$), vitamin D ($p = 0.03$), copper ($p = 0.02$) and folate ($p = 0.04$) versus CP patients of other aetiologies, but consumed similar amount of other nutrients. CP patients that smoked had lower intake of energy ($p = 0.031$), carbohydrate ($p = 0.017$), polysaturated fats ($p = 0.05$), fiber ($p = 0.01$), potassium ($p = 0.017$), magnesium ($p = 0.04$), and vitamin C ($p = 0.04$) compared to non-smokers.

Conclusions: Whilst the overall dietary intakes of CP patients and controls did not differ, we found that patients who consume alcohol and smoke had poorer intakes of several important nutrients. This may contribute to their overall poor outcomes and suggests that these groups should be prioritised for nutritional intervention strategies.

Association of body mass index with clinical outcomes in patients with cystic fibrosis: A systematic review and meta-analysis of 3100 patients

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Introduction: The prevalence of overweight and obesity (BMI 25–29.9 kg/m² and ≥ 30 kg/m², respectively) is continuously increasing among patients with cystic fibrosis (CF). However, it is unclear whether there is an advantage of increasing weight over the normal range in CF.

Purpose: We aimed to evaluate the association of altered body mass index (BMI) or body composition and clinical outcomes in CF patients.

Materials and methods: The literature search was conducted on November 2, 2020 in three databases: MEDLINE (via PubMed), Embase,