P-05-09.

Age aspect of the immune status of patients with chronic pancreatitis

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Abstract

Background: Among the negative consequences of constant stressful exposure in patients with chronic pancreatitis (CP), immune deficiency develops, which may differ in different age periods. Thus, we studied and analysed the state of the immune system (IS) of patients with CP in the age aspect.

Methods: We studied the IS parameters of 161 patients with CP, with an average age of (58.17±2.46) years, which were divided depending on the biological age into three groups: up to 45 years (54 patients), 46-65 years (76 examined), older than 65 years (31 patients). The control group consisted of 25 practically healthy individuals. The following parameters of IS were studied: the number of the total population of T-lymphocytes (CD3), B-cells (CD72), and subpopulations of T-helpers / inducers (CD4) and T-suppressors / killers (CD8), natural killers (CD16), which determined in a cytotoxic test using monoclonal antibodies of classes CD3, CD4, CD8, CD16, CD72 by enzyme immunoassay by the level of expression of membrane antigens.

Results & Conclusion: Revealed a decrease in CD3, CD4, CD8, CD16 and CD72 in young patients by 44.8; 36.1; 24.4; 32.2 and 18.4%, respectively ($p<0.001$); in middle age - by 54.6; 37.2; 29.9; 41.4 and 25.6%, respectively ($p<0.001$); in patients older than 65 years, probable T-lymphocytopenia was determined according to the indicated indicators by 66.4; 47.8; 37.7; 70.8; 41.5% ($p<0.001$) compared to the control group. With an increase in the age of CP patients, nonspecific activation of humoral immunity was observed due to an increase in IgG, IgA, IgM in young CP patients by 6.7; 13.3; 30.1% ($p<0.001$); by 9.6; 25.1; 30.1% in middle age ($p<0.001$) and by 16.9; 30.9; 41.4% over 65 years ($p<0.001$), respectively, compared with healthy individuals. The revealed tendencies for a decrease in complement activity by 56.6% in young patients by 54.8% on average and by 78.2% in the elderly ($p<0.001$) and an increase in the CIC in the contingent were confirmed and deepened with aging of patients by 58.9; 75.8 and 69.1%, respectively ($p<0.001$).

P-05-10.

Evaluation of disease recurrence and evolution into chronic pancreatitis in 492 patients after a first episode of acute pancreatitis

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Abstract

Background: Acute pancreatitis (AP) may relapse and progress to chronic pancreatitis (CP). Risk factors for progression are many and not all clearly identified. Furthermore, it is unclear how many patients progress directly to CP or through a recurrence of pancreatitis. The aim of the study was to determine percentage of patients with recurrent and CP after a first attack of AP.

Methods: Patients with AP observed in our centre in the period 2013-2020 have been included. Exclusion criteria were a diagnosis of CP at first episode of AP, interval from first episode of AP and observation in Verona >1 year, and follow-up <1 year.

Results: We studied 492 patients (310 males and 192 females, estimated age 47.8±18.2 years, mean follow-up 4.6±2.7 years). Frequency of relapse was 44.7% and of diagnosis of CP 10.4%. Risk factors for relapse were gene mutations, anatomic abnormalities, oedema at first episode of AP, whereas a diagnosis of autoimmune pancreatitis and biliary aetiology were protective. Risk factors for CP were male sex, alcohol, cigarette smoking, recurrent pancreatitis, paraduodenal pancreatitis and outcomes of pancreatic necrosis.

Conclusion: Recurrence of pancreatitis and diagnosis of CP are frequently observed after a first episode of AP. CP may be diagnosed even in the absence of disease relapse, but disease relapse increases the probability of a diagnosis of CP during follow-up.

P-05-11.

Differences in experimental pain sensitivity between African American and non-African American individuals

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Abstract

Background: Pancreatic Quantitative Sensory Testing (P-QST) is a neurosensory evaluation increasingly used to help characterize pancreatic pain. Because differences in experimental pain sensitivity have been reported across racial groups, this phenomenon is important to investigate prior to the wider distribution of the P-QST technique. Therefore, we aimed to assess pain sensitivity in African American (AA) individuals compared to a non-AA population.

Methods: This was a cross-sectional, multi-centre study of adults (≥18 years) with no pancreatic disease and no abdominal pain. Recruitment efforts focused on obtaining equal numbers of males and females and equal age distributions. All subjects underwent P-QST testing according to previously published techniques, including threshold measurements of pressure detection (PDT), pressure tolerance (PTT), conditioned pain modulation (CPM, reflective of intactness of descending pain control), and temporal summation (reflective of presence of central sensitization). Demographics and P-QST parameters were compared in AA and non-AA subjects.

Results: A total of 267 subjects (female n = 138, 52%) were included: 157 (59%) AA and 110 (41%) non-AA subjects. Both cohorts were well balanced with respect to age and gender distribution. The mean age was 48.0 (range 18-84) years. Indices of pressure stimulation (PDT/PTT sums, ratios) were comparable between the two subgroups. Subjects in the AA-cohort showed significant hyperalgesia to the cold-pressor test compared to the non-AA cohort. In the AA cohort, 52% of the subjects disengaged in the cold pressor test vs. 30% in the non-AA cohort (P=0.01). The risk of cold pressor test disengagement was increased in the AA-cohort vs. the non-AA cohort in time to-event analysis (hazard ratio 1.93, 95% confidence interval [1.28 to 2.89]; P=0.002) No significant differences were seen in CPM response (AA cohort median 18.4% vs. 19.2% in the non-AA cohort (P=0.82)) or for repetitive pin-prick stimulation (temporal summation).

Conclusion: P-QST measurements in AA patients were largely similar to those in non-AA patients, however significant differences were seen in the cold pressor test between groups which is similar to findings in prior studies. Further studies are needed to understand how experimental pain sensitivity differs between racial groups, and inform future modifications in normative values.