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where GCs were given to less than 100% of patients. The pooled prevalence of pancreatic exocrine insufficiency was 36.2% (95%CI 20.4-52.0, P 96.4%).

**Conclusions:** A large proportion of patients with AIP displays concomitant exocrine and endocrine insufficiency at the time of diagnosis. The incidence of diabetes at the longest available follow up tends to increase in patients treated with GCs. Further long-term studies are warranted to assess the impact of GCs on endocrine and exocrine function.

**Endoscopic procedures and quality of life in chronic pancreatitis patients**

Mikeal Parhialla 1, C. Nøjgaard 2, A. Bartholdy 2, A. Waage 3, P. Ignatavicius 4, E. Trond 4, G. Dimcevski 5, I. Nordenas 5, E. Kalaitzakis 6, A. Drewes 6, A. Hadi 6, S. Olesen 7, J. Poulsen 7, J. Laukkarinen 1

1 Dept of Gastroenterology and alimentary tract surgery, Tampere University Hospital, Tampere, Finland
2 Department of Gastroenterology and Gastrointestinal Surgery, Hvidovre Hospital, Hvidovre, Denmark
3 Department of Gastroenterology, Oslo University Hospital, Oslo, Norway
4 Institute for Digestive Research and Department of Surgery, Lithuanian University of Health Sciences, Kaunas, Lithuania
5 Department of Gastroenterology, Haukeland University Hospital, Norway
6 Bispebjerg Hospital, Copenhagen, Denmark
7 Department of Gastroenterology and Hepatology, Centre for Pancreatic Diseases, Aalborg University Hospital, Denmark

**Introduction:** Chronic Pancreatitis (CP) may cause chronic or intermittent abdominal pain, as well as endocrine and exocrine pancreatic insufficiency. Morphological changes in the pancreatic tissue, leading to and complications such as biliary strictures and pseudocysts may need endoscopic interventions.

**Purpose:** Our aim was to investigate the frequency of endoscopic procedures in the CP patients, and to study pain and quality of life in these patients after the procedures.

**Materials and methods:** SBPC database is the largest prospectively multicentre CP database, meeting M-ANNHEIM diagnostic criteria. In this study, 1176 CP patients from 4 countries and 8 centres were included. We analysed patients who underwent endoscopic procedures and gathered all related information, such as types of endoscopic procedures, pancreatic function, pain and EORTC C30 Quality of life (QOL) questionnaire. Patients who did not have any invasive interventions were used as a control group (n=916).

**Results:** 260 patients (22%) of the CP patients underwent endoscopic procedures. Procedures were performed median one year (range 0-39 years) after the CP diagnosis. 68% of the patients were males. Age median was 59 years (range 20-90 years). Most common etiological factors were alcohol in 65% and smoking in 71%. Biliary duct stenting was performed in 37% of the patients. Pancreatic stenting was performed in 56% (n=146), biliary stenting in 37% (n=97) and both in 13% (n=34). After the endoscopic procedure, 42% of the patients were painless, 42% had intermittent pain and 17% constant pain. Fewer patients were painless in the endoscopy group compared to the control group (42% vs 51%, p=0.020). Exocrine pancreatic insufficiency was slightly more common in the endoscopic group compared to the control group, 62% vs 53% (p=0.020). 23% of the patients underwent pancreatic surgery later. QOL responses was similar in functioning and in symptom scores in the endoscopic and control population.

**Conclusions:** One out of five of the CP patients underwent endoscopic procedures in the SBPC database. 56% underwent pancreatic and 37% biliary stenting. Exocrine pancreatic insufficiency was slightly more common in the endoscopic group compared to the control group. Constant pain and Quality of life were similar between the groups.

**Acute Idiopathic Pancreatitis in our clinical setting.**

M. Ruiz-Rebollo 1, M. Muñoz-Moreno PhD 2, M. García-Sánchez MD 1, M. Menéndez-Suárez 1, C. Flórez-pardo 1, S. Carrera-Yusta 1

1 Servicio de Aparato Digestivo. Hospital Clínico Universitario. Valladolid (Spain)
2 Unidad de Apoyo a la Investigación. Hospital Clínico Universitario. Valladolid (Spain)
3 Servicio de Aparato Digestivo. Hospital Clínico Universitario. Valladolid (Spain)

**Introduction:** Acute pancreatitis (AP) is an inflammatory disorder of the pancreas. Idiopathic acute pancreatitis (IAP) is an AP where the cause cannot be determined after an initial thorough evaluation and, therefore, etiological treatment cannot be performed.

**Purpose:** The aim of our research was to study the figures and clinical characteristics of IAP in our Unit.

**Materials and methods:** Retrospective study of a prospective database on AP patients admitted to our Unit between March 2014 and November 2021. Patients suffering from AP were included and compared with other etiologies. Clinical, demographic, laboratory and radiological variables were recorded. The severity of AP (Atlanta classification), organ failure, local and systemic complications, necrosectomy, Intensive Care Unit admission (ICU), length of hospitalization and recurrent pancreatitis (RAP) were considered outcome measures.

**Results:** In the period studied, there were 869 AP admissions and 171 patients finally included. 147 patients suffered from IAP (20%), aged 67.39±16.3 (54% 46%), mainly non-smokers (70%), non-alcoholic (56%) and overweighted (68%). 15% suffered from more than one episode of acute pancreatitis (RAP), length of hospital stay was between 3 and 7 days in 68% or our IAP patients; only 3 patients required ICU admission. According to Atlanta classification, 112 episodes were mild, 27 moderately-severe and 8 severe. 5 patients died. When we compared IAP patients with the rest of etiologies, we found that smoking was related with IAP (p=0.047), IAP patients had a shorter hospital stay (p=0.028), lower RPC levels on admission (p=0.032), a higher necrosectomy procedures (p=0.046) and a tendency to develop recurrent episodes of AP (p=0.045).

**Conclusions:** In 20% of our AP patients the etiology remained unclear. Fortunately, in terms of severity, IAP patients did not suffer from more severe episodes; evenmore, IAP patients had shorter hospital admissions.

**Reference:**

Del Vecchio Blanco et al. Idiopathic acute pancreatitis: a review on etiology and diagnostic work-up.Clin. J. Gastroenterol (2019) 12:5111524. Sánchez-Rodríguez et al. Current management of acute idiopathic pancreatitis and acute recurrent pancreatitis.Rev Clin Esp. 2019;219(5):266–274

**Acute pancreatitis associated with COVID-19 vaccination (clinical case report)**

N. Byelyayeva 1, N. Gubergrits 1

1 Into-Sana Multifield Clinic, Ukraine

**Introduction:** A 38-year-old male presented with acute pancreatitis that occurred one day after administering the second dose of the Pfizer-
BioNTech COVID-19 mRNA vaccine. Acute pancreatitis following the vaccination against COVID-19 is extremely rare.

**Purpose:** After this vaccine was officially approved for mass use, three clinical cases of acute pancreatitis following the vaccination have been reported (in each case, Pfizer-BioNTech COVID-19 mRNA vaccine, 30 g doses).

**Materials and methods:** The patient had no history of diseases and mentioned only rare colds. Aching pain (not related to physical activity) appeared in the left side of the lower back one day after the second dose of the Pfizer-BioNTech COVID-19 mRNA vaccine. Clinical urinalysis was normal. The next day, he experienced pain in the left hypochondrium radiating to the lower back, decreased appetite, general weakness, nausea, loose stools up to 3 times a day, bloating, and subfebrile temperature. General blood analysis revealed leukocytosis and ESR acceleration. There was an overall increase for serum -amylase (15 times), serum pancreatic isoamylase (12 times), urine -amylase (6 times), and serum lipase (12 times). The blood glucose level was normal. According to the results of endoscopic ultrasonography and computed tomography, acute edematous pancreatitis was detected.

**Results:** Alcohol-induced, biliary, and autoimmune etiology of the disease were excluded. PCR was negative. Currently, the patient’s condition is satisfactory after the infusion therapy. Serum and urine pancreatic enzymes indices normalized. Fecal elastase-1 is slightly low (183 g/g). We continue the patient’s monitoring.

**Conclusions:** It is necessary to consider the possibility of acute pancreatitis that may occur after COVID-19 vaccination.

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**Immunogenetic predisposition in chronic alcoholic pancreatitis (CAP)**

N. Byelyayeva 1, N. Gubergrits 1, G. Lukashevich 2

1 Into-Sana Multifield Clinic, Ukraine
2 Donetsk National Medical University

**Introduction:** Alcohol is known to be the main etiological factor of CAP. However, CAP may occur in social drinkers and not occur in alcohol abuse. There might be a possibility of immunogenetic predisposition for CAP occurrence.

**Purpose:** To study immunogenetic features of CAP patients and correlations between peculiarities of the clinical picture and patient’s phenotype.

**Materials and methods:** 290 CAP patients and 450 healthy individuals (inhabitants of the same region) were examined. We studied incidence of erythrocyte’s antigens of Rhesus-factor and AB0 system and leukocyte antigens Ψ HLA system, A, B, C, DR locus, using hemagglutination technique, microlymphocytotoxicity assay, and polymerase chain reaction. Proceeding from these results, we calculated the disease risk (R).

**Results:** CAP risk is increased in case of patient’s blood type A(II) (R = 2.2), combination of Rhesus-factor antigens CDe (R = 2.0), presence of such HLA antigens in phenotype as A1 (R = 3.1), B13 (R = 2.8), B18 (R = 3.1), B27 (R = 3.0), Bw40 (R = 4.8), DRB1*11 (R = 2.6), DRB1*13 (R = 2.2), haplotype A10-Cw6 (R = 3.9). Antigen Cw4 acts as an antigen-protector (R = 0.23). Blood type A(II) increased risk of exocrine pancreatic insufficiency (R = 3.2). Haplotype A10-Cw6 was associated with evident pain syndrome (R = 2.1), significant hyperenzymemia (R of elevated immunoreactive trypsin blood level = 3.4). HLA antigen Bw40 was associated with evident reduction of lipase debit-part (R = 3.7) and with increased L index of pancreatic ultrason sound histogram (R = 3.7). HLA antigen B13 was associated with pancreas calcification (R = 4.0).

**Conclusions:** CAP occurs due to the immunogenetic predisposition. Some peculiarities of its clinical course are associated with the erythrocyte and leukocyte antigens in patient’s phenotype.

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**Bacterial overgrowth syndrome (BOS) and magnesium levels in blood and hair of patients with chronic pancreatitis (CP) and exocrine pancreatic insufficiency**

N. Byelyayeva 1, N. Gubergrits 1, L. Varoshenko 2

1 Into-Sana Multifield Clinic, Ukraine
2 Donetsk National Medical University

**Introduction:** BOS causes aggravation of dyspeptic complaints and nutritional insufficiency. Moreover, BOS is one of the reasons for the lack of effectiveness of enzyme replacement therapy in CP.

**Purpose:** To study BOS occurrence, to assess magnesium levels in blood and hair in correlation with pancreatic insufficiency in CP.

**Materials and methods:** We examined 64 patients with CP and 18 healthy individuals. Samples of secretory chyme from initial part of jejunum were aspirated by using the jejunal probe. Bacteriological testing of these samples was conducted. Magnesium blood level was determined by Lachema (Czech Republic) kits with ABXk-02-CNPP-TMT (Russia) biochemical photometric kinetic analyzer. Magnesium hair level was determined by atomic absorption spectrometry with THERMO ELECTRON (USA) analyzer. Fecal elastase test was performed (Schebo, Germany).

**Results:** BOS was diagnosed in 45 (70.3%) patients. Number of microorganisms in 1 mL of jejunal content in healthy individuals was equal to 100,0±510 CFU, while in CP patients 1 698 000±3 350 CFU (p less than 0.05). Enterococcus was revealed in 16.3%, B. cereus Ψ in 3.5%, E. coli Ψ in 39.8%, E. Paracolica Ψ in 3.6%, Staphylococcus Ψ in 18.3% cases. The correlation between CFU and fecal elastase-1 was established (r = -0.47). Magnesium blood level was similar in patients with CP and healthy individuals. Magnesium level in patients with CP was 0.85±0.14 mol/L vs 0.82±0.11 mol/L in healthy individuals (p more than 0.05). Magnesium level in hair was significantly decreased in patients with CP to 218.7±20.9 µg/g, while healthy individuals had level of 293.5±29.6 µg/g (p less than 0.05). There was a positive correlation between magnesium level in hair with results of fecal elastase test (r = -0.54).

**Conclusions:** BOS occurs in 70.3% of patients with CP. BOS severity and magnesium deficiency both depend on the pancreatic insufficiency severity.

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**Psychosomatic disorders in chronic pancreatitis**

N. Gubergrits 1, G. Lukashevich 2

1 Into-Sana Multifield Clinic, Ukraine
2 Donetsk National Medical University

**Introduction:** Psychosomatic disorders may cause aggravation of the clinical manifestations of chronic pancreatitis (CP), especially pain syndrome. Features of these disorders have not been sufficiently studied.

**Purpose:** To assess psychosomatic status in CP.

**Materials and methods:** 212 patients with CP and 30 healthy individuals were examined. Psychosomatic status of patients was assessed by using the psycho-geometric test and Luscher color test.

**Results:** According to the results of Luscher color test, 122 patients (57.6%) with CP had low activity and motivation for achievements, passive lifestyle, low self-esteem, feeling of dependence on external circumstances, introversion. According to the psycho-geometric test, 121 patients (57.1%) belonged to the triangle psychological type: inextricable problems, indeterminate self-esteem, changeable mood and decisions. 47 patients (22.1%) belonged to the square psychological type: tendency to go into details, decision-making delays. 22 patients (10.4%) belonged to the triangle psychological type: inability to admit mistakes, pragmatism, intolerance. 12 patients (5.7%) belonged to the circle psychological type: high sensitivity, advanced empathy, indecision, subjective approach to