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**SITAGLIPTIN**

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Several large clinical studies have confirmed the efficacy and safety of the dipeptidyl peptidase (DPP)-4 inhibitor sitagliptin for the management of type 2 diabetes. Pharmacological inhibition of DPP-4 is an alternate approach to increase circulating concentrations of endogenous active GLP-1 and thus glucose-dependent insulin secretion. Sitagliptin is a new oral glucose-lowering medication that acts via the incretin hormone system. The most common side-effects are headache and pharyngitis. Sitagliptin therapy has been shown to result in increased pancreatic duct replication, acinar to ductal metaplasia and less frequently, acute pancreatitis in a rat model of type 2 diabetes.

We report four cases of pancreatitis that developed in patients after between 9 days and 18 months of treatment with sitagliptin and that was attributed to treatment after a thorough search for etiology.

**Patients and methods :** 2 men and 2 women aged 49 to 67 years (BMI 23 to 33) were admitted for acute pancreatitis 9 days to 18 months after administration of sitagliptin for type 2 diabetes. Balthazar score was 2 points in 3 patients and 3 points in 1 patient. All patients promptly improved after withdrawal of sitagliptin. No reintroduction was done. There was no other risk factor for pancreatitis (lithiasis, alcohol consumption, metabolic disorder - triglyceridemia or calcemia, or tumour). There was no familial history of pancreatitis but a CFTR gene mutation p.G542X (case 1) and a SPINK gene mutation (p.R67H) (case 3) were found in two patients. Table 1. Inherent accountability

	Case 1	Case 2	Case 3	Case 4
Semiology	S2	S2	S2	S3
Chronology	C2	C3	C1	C1
Inherent	I2	I3	I1	I2

**Conclusions:** Acute pancreatitis in patients receiving sitagliptin seems to be rare but physicians should be aware of this possibility and be cautious about the monitoring of long-term treatment. Underlying genetic alterations (SPINK1, CFTR) may favor pancreatitis.

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**ASSESSMENT OF THE ACCURACY OF ENDOSCOPIC ULTRASOUND (EUS), EUS CYTOLOGY AND CT COMPARED WITH A GOLD STANDARD IN THE DIAGNOSIS OF PANCREATIC LESIONS.**

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**Introduction:** Histology and malignant cytology are the gold standard for establishing the diagnosis of pancreatic neoplasms. The diagnosis is established using CT and EUS with cytology.

**Aim:** To assess the accuracy of EUS, CT and EUS cytology in patients with pancreatic lesions undergoing EUS in comparison with the gold standard.

**Patients and Methods:** Sixty-one consecutive patients undergoing evaluation of pancreatic lesions at a tertiary referral centre were selected over a twelve-month period. Reports were categorized into non-diagnostic, benign, mucinous neoplasms and malignant.

**Results:** 61 patients were included in the study. 47/61 (77%) had complete data sets for the three modalities. The gold standard was present in 26/ 59 (44%) patients. 17 patients had malignant lesions, 3 patients had neoplastic mucinous cysts, and benign lesions in 3 patients.

Cytology was found to have a sensitivity of 91% and a specificity of 100% with a negative predictive value (NPV) of 50% for non-malignant lesions. The positive predictive value (PPV) for malignant lesions was 100%. EUS was found to be 82.6% sensitive and 50% specific with a NPV of 33% for benign lesions and PPV of 100% for malignant lesions. CT was found to have a sensitivity of 76% and a specificity of 66% with a PPV of 89% and a NPV of 40%.

**Conclusion:** Despite the relatively small number of patients in this series, the accuracy of EUS, CT and cytology is consistently high for malignant lesions. However, this is reduced in the event of benign lesions.

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**SELENIUM DEFICIENCY AND PAIN IN CHRONIC PANCREATITIS**

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**Introduction:** Patients with chronic pancreatitis (CP) are at high risk of antioxidant deficiencies. Pain is a frequent symptom in CP patients and difficult to treat.

**Purpose:** to determine the feasibility of sodium selenite (SS) in the treatment of patients with CP.

**Patients & Methods:** 40 patients with CP and 20 healthy subjects (HS) were included into the study. The dynamics of pain on 3-point Likert scale were analyzed in the beginning and every 5th day for 30 days. The content of selenium in plasma was studied at the beginning and at the 30th day of study. Patients were divided into two groups. The first group received standard therapy (ST): prifiniy bromide, pantoprazole, pancreatin. The second group was receiving ST and SS 300 µg/ day for 5 days, then 200µg / day for 30 days.

**Results:** The average selenium plasma of patients with CP was 64,99 ± 3,2 µg/l, which was below the average in the control group 83,3 ± 3,26 µg/l (p <0,001). On the 5th,

10th and 15th days of treatment significant differences in the pain characteristics were revealed. The patients of second group had better results in 1,25 time ( $p < 0,05$ ), in 2,42 time ( $p < 0,001$ ) and in 2,43 time ( $p < 0,001$ ), respectively. On the 30th day the selenium content in second group was increased up to  $96,5 \pm 3,29 \mu\text{g/l}$  ( $p < 0,001$ ).

**Conclusions:** SS is an effective drug in treatment of selenium deficiency and could be used in initial complex therapy for pain relief in CP.

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### ROLE OF ENDOSCOPIC ULTRASONOGRAPHY IN THE EVALUATION OF HIGH RISK PANCREATIC CYSTIC LESIONS: TEN YEAR SINGLE CENTER EXPERIENCE

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**INTRODUCTION:** Pancreatic cystic lesions evaluation by endoscopic ultrasonography (EUS) (echogenic debris, presence of septae, endocystic projections, central scar, central calcifications and/or calcifications in the tumor wall) and fine needle aspiration (FNA) are methods used for detection of early signs of malignancy.

**OBJECTIVES EUS and EUS-FNA** diagnostic assessment of high risk pancreatic cystic lesions diagnosed by routine radiological screening methods. **METHODS** Retrospective single centre study including 203 patients (mean age 68.5 years) with high risk cystic lesions of the pancreas diagnosed by CT, MR, US or EUS. Cysts with suspicious for high malignant potential underwent FNA-cytology. CEA 200-500ng/mL was evaluated as intermediate, more than 500ng/mL was significant for mucinous cystic neoplasms. Patients with solid mass lesions were excluded.

**RESULTS:** Mean cysts size was  $26.4 \pm 10.8$  (6-90mm). Cystic lesions less than 20mm ( $n=82$ ), lesions bigger than 20mm ( $n=121$ ). IPMN type lesions were  $n=3$  (1.5%). EUS-FNA study of the cyst content ( $n=182$ ); malignant cells ( $n=28$ ), adenocarcinoma ( $n=22$ ), CNET( $n=2$ ), Non-Hodgkin lymphoma ( $n=1$ ), atypical cells ( $n=8$ ), mucinous cystic tumors ( $n=3$ ), inflammatory content ( $n=73$ ), non-inflammatory content ( $n=81$ ). CEA elevation was obtained in 2% of cases.

**CONCLUSIONS:** Diagnostic sensitivity of EUS alone is lower comparing to EUS-FNA due to limited technical access. Cytology alone has poor results (definite diagnosis was made in 15.4% cases). Combined CEA and cytology studies enhanced diagnostic sensitivity comparing each method separately. Majority of included patients with cystic lesions had benign structure. Cystic lesions more than 20mm in size had higher malignancy rate.

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### CHRONIC PANCREATITIS: BASING OF PERIPHERAL PANCREATIC HYPERTENSION AND WAY OF IT SURGICAL CORRECTION

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**Introduction:** Pancreatic hypertension and neuroimmune inflammation are the main reasons of severe abdominal pain in cases of chronic pancreatitis (ChP). But routine surgical procedures (Frey, Partington) are successfully not always.

**Aims:** Basing of new reason of severe chronic abdominal syndrome in patients with ChP and proposal of new surgical approach for it correction.

**Patients and methods:** During 1990-2011 years we operated on 454 patients with ChP. From 2009 year we performed 12 antegrade double balloon enteroscopy (DBE) examinations of the pancreaticojejunostomoses «side-to-side» and detected in their lumen in 5 cases residual pancreatolithes. During last two years in randomized trial we performed 50 Bern procedures added Izbicki resection (in 25 cases) and opened common bile duct (22). 74% of our operations were repeated. For pancreatic head and tail resection we used electrocoagulation (27 cases) and national three-wave infrared impulsed laser (23). We showed during laser resection and lithotripsy, by morphology and postoperative DBE that so called «calcinates» really are the peripheral pancreatolithes which obstructed the tributary ducts. They are the reason of peripheral pancreatic hypertension and chronic abdominal pain. Therefore we propose during primary surgery of ChP the laser longitudinal «cylindric» virsungectomy (4 cases).

**Results:** After laser resections we received: full haemostasis without additional vessels ligation and pancreaticojejunostomy leakage, low level of complications (8,7% vs 33,3% after electroresections) and adequate postoperative functional results.

**Conclusion:** Besides magistral pancreatic hypertension due to the virsungolithes and strictures exist peripheral too because of tributaryductolithes. For their extraction primary cylindric virsungectomy or Izbicki resection in repeated cases are indicated.

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### INFLUENCE OF PREOPERATIVE BILIARY DRAINAGE ON SURGICAL OUTCOME AFTER PANCREATODUODENECTOMY

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**Introduction:** Controversy exists regarding the impact of preoperative biliary drainage on morbidity and mortality rates after pancreaticoduodenectomy.

**Aims/Objectives:** Aim of the present study was to determine whether preoperative biliary drainage is associated with increased morbidity and mortality rates after pancreaticoduodenectomy.

**Patients and Methods:** Between February 2005 and December 2010, 131 consecutive cases underwent pancreaticoduodenectomy and were included in a prospective observational study. 29% of patients (38/131) had no jaundice, while 71% (93/131) had jaundice at the diagnosis. Among these jaundiced patients 57% (53/93) underwent preoperative biliary drainage, while 43% (40/93) were not drained.

**Results:** Perioperative mortality rate was 3% (4/131), while 54% of patients (71/131) experienced complications after surgery. Pre-operative bilirubin serum levels higher than 4.5 mg/dl discriminated patients with complications from those without post-operative complications (sensitivity 82%, specificity: 52%). The multivariate logistic regression analysis demonstrated preoperative biliary drainage as unique predictor of post-operative complications (OR=8.24, CI95% 3.16-22.54,  $p < 0.01$ ). The frequencies of wound infection ( $p > 0.001$ ),