

# Abstracts

## Medical Fundamental Sciences Section

### Anatomical and Clinical Variations of the Pancreato-Choledochal Junction of the Papilla Vater

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Due to the widely used endoscopic procedures, the anatomical and clinical relationship of the pancreato-choledochal junction is of particularly interest. One hundred and thirty four bilio-duodeno-pancreatic specimens, with age range 18-85 years, without upper gastrointestinal pathology were examined. Methods – anatomical micro- and macropreparation, morphometry, common bile duct/duodenal angle measurement, histotopography and frequency appreciation of the pancreatic channel of the common bile duct were performed. Papilla Vater's localization: D1-10 (7.5%); D2 - 112 (83.6%); D3 - 12 (9%). The distance pylorus-Vater's papilla was: maximal-13cm; minimal-6cm; mean distance-9,4cm. Small duodenal papilla localization; D1 - 3 (18.8 %); D2 - 13 (81.2 %) total-11.9% (n=16). Relationship between small duodenal and Vater's papillas were: superior-posterior (n=1); superior (n=1); superior-anterior (n=12); anterior (n=2). The distance pylorus-small duodenal papilla: minimal- 4cm; maximal-9cm; mean distance-6cm. The distance between the papillary orifices: minimal-1,6cm; maximal-5cm; mean distance-2,38cm. Relationship between the common bile duct and the pancreas were: partially covered by a "tongue" of pancreatic tissue-44%; totally covered-30%; uncovered-5%; covered by two pancreatic tissue "tongues" - 9%. Vater's papilla localization on the duodenal wall: in the middle of the medial wall-99 (73.8%); on the junction of the medial and posterior wall-35(26.2%). The common bile/duodenal angle was examined in all cases and the following limits 20 ° -90 ° were appreciated; the vertical limits 20 ° -45 ° (75%), while the horizontal limits 45 ° -90 ° (25%). The distance papillary opening common bile duct penetration through the duodenal wall was: maximal-2.2 cm; minimal-1 cm; mean distance-1.5 cm. The multiple study possibilities provided by modern examination procedures allow establishing new conceptions regarding the anatomical variations of the pancreato-choledochal junction.

### Anatomical and Surgical Relations of the Splenic Vessels and Pancreas

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Anatomical and surgical relationship of the splenic vessels and the pancreas is important under the circumstances of modern organ and blood-flow preserving surgical principles.

Topographical relationship of the splenic vessels and pancreas were studied on 36 corrosive and semicorrosive casts. The specimens were injected with autopolymerisant acrylic mass "РЕДОHT-03®" and "ПІРОТАКРИЛ-М®". Solid:liquid ratio was 4:5 or 2:3, in order to obtain flexibility dibutylphtalat was added. In 93% cases a. lienalis was orientated inferior wit a length of 3-5 cm, being adherent to the pancreatic tissue. In 76% cases a. lienalis was located posterior to the mesopancreas, in 14% - on the superior pancreatic edge, while in 10% - intrapancreatic location was observed. In the distal portion of the pancreas, a. lienalis is isolated from the pancreatic tissue and located on superior pancreatic edge (80%) while in 20% - on the antero-superior pancreatic surface. The brunches of the splenic artery come across the splenic vein in oblique or vertical direction. The splenic vein was located in the middle and behind of the pancreatic body and tale in 17%, in 80% - closer to the superior pancreatic edge and in 3% closer to the inferior pancreatic edge. Splenic vein presents direct trajectory. Perivascular fibrous carcass is adherent to the pancreatic capsule by means of fibrous fibers, orientated along the pancreatic vessels. Conjunctive tissue is located between the perivascular fibrous carcass of the splenic vessels and the pancreas, fact that allows their separation during surgery. The established anatomical relation of the splenic vessels and the pancreas allows safe manipulations in caudal pancreatic resections, preserving the blood flow through the splenic vessels.

## Antibacterial Properties of Naftochinone Derivatives

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From ancient time was known that vegetable alkaloids of green peals and walnut's leaves have antimicrobial and antifungal effects. It was found that these structures of the walnuts contain diferent compounds, derivatives of naftochinone, which were degraded untill natural alkaloids or actulamentes obtained through the synthesis (nucina, benzil-alcoholic solution of juglone). Studies in vitro demonstrate that benzil-alcoholic solution of juglone in concentration 0,02%; 0,01%; 0,006%; 0,0003%; 0,0001%; 0,00038% and 0,00019% poses a pronounce antibacterial activity against gram-positive microorganisms (Staphilococcus aureus (Wood-209), Streptococcus faecalis) and gram-negative (Escherichia coli, Pseudomonas aeruginosa, Proteus vulgaris). Therefore, growing of majority of the microorganismal strains was inhibited by the juglone solution 0,00019% at the same time benzil-alcoholic solution manifests the same effect in double concentration gram-positive cocci (Streptococcus faecalis and Staphilococcus aureus, which was killed by benzil-alcoholic solution of juglone 0,00009%) with more sensibility to this preparate. Experimental researches in vitro elucidated that benzil-alcoholic solution of juglone in concentration 0,05%; 0,025%; 0,0125%; 0,0062%; 0,0031%; 0,00155%; 0,00077%; 0,00038%; 0,00019%; 0,00009%; 0,000045% manifestes antifungal properties against Candida albicans, Aspergillus niger, Aspergillus fumigatus, Penicillium. In these conditions activity against candidas is 4 times higher, against aspergilles and penicillium 2 times, more intensive than standart benzyl-alcoholic solution. These data demonstrates that antibacterial and antifungal action of the following preparate is determined as a synthetic derivative of naftochinone – juglone.