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WIRSUNG DUCT CHANGES IN PATIENTS WITH CHOLELITHIASIS

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Resume. This article is about changes of pancreatic duct in patients with cholelithiasis. It has been noted there might be a connection between cholelithiasis and chronic inflammation of the pancreatic duct. Changes of pancreatic duct might be a frequent cause of chronic pancreatitis. The article provides an analysis of 46 case histories of the patients with chronic cholecystitis.

Keywords: Wirsung duct, cholelithiasis, chronic pancreatitis, ultrasound examination.

Introduction. Biliary pancreatitis is one of the serious complications of cholelithiasis. According to some authors about 45% of all pancreatitis is a consequence of the biliary tract disease [1]. However, the role of gallstone disease in the causation of chronic pancreatitis is still controversial. Although we know that gallstones can pass and sludge to major duodenal papilla and cause obstruction and stenosis, we noticed changes in Wirsung duct during investigations done on patients with cholelithiasis. It has been noted in a few publications that there might be a connection between cholelithiasis and chronic inflammation of the pancreas and changes in the pancreatic duct. And biliary pancreatic reflux may initiate changes of the pancreatic duct and can cause pancreatitis [2]. This study shows the frequency of acute pancreatitis signs in association with dilated common bile duct and pancreatic duct in patients with cholelithiasis. Gallstones can cause obstruction of the common bile duct, which is a tube that connects the liver and the gallbladder to the small intestine. The obstruction may cause the pancreatic duct to become swollen and inflamed, leading to changes in its size and structure and can lead to the development of pancreatitis.

Aim: to analyze changes in some parameters of the Wirsung duct in patient with chronic cholecystitis.

Objective:

1. Measure the diameter of the common bile duct.
2. Measure the diameter of the common bile duct.
3. To analyze the obtained data.

Materials and methods. The study analyzed 46 case histories of the patients with chronic cholecystitis for the period 2021-2022 was carried out in «Minsk City Emergency Hospital». A retrospective analysis of medical records and ultrasound data of patients was performed. Statistical processing of the results was performed using the table editor "Microsoft Excel 2017" and "Statistica" 10.0.

Results and their discussion. Among adult (n=46) the average of the patients 67,3 ± 2,1 years, including women 29 (63%), men 17 (37%). The relation of male/female patients reflects the increased risk for women to develop chronic cholecystitis.

After analyzing the ultrasound examination of these patients: dilated common bile duct was found in 24 patients (52%), diameter was 5,8 ± 1,39. Dilation of the common bile duct was observed in 15 women and 9 men.

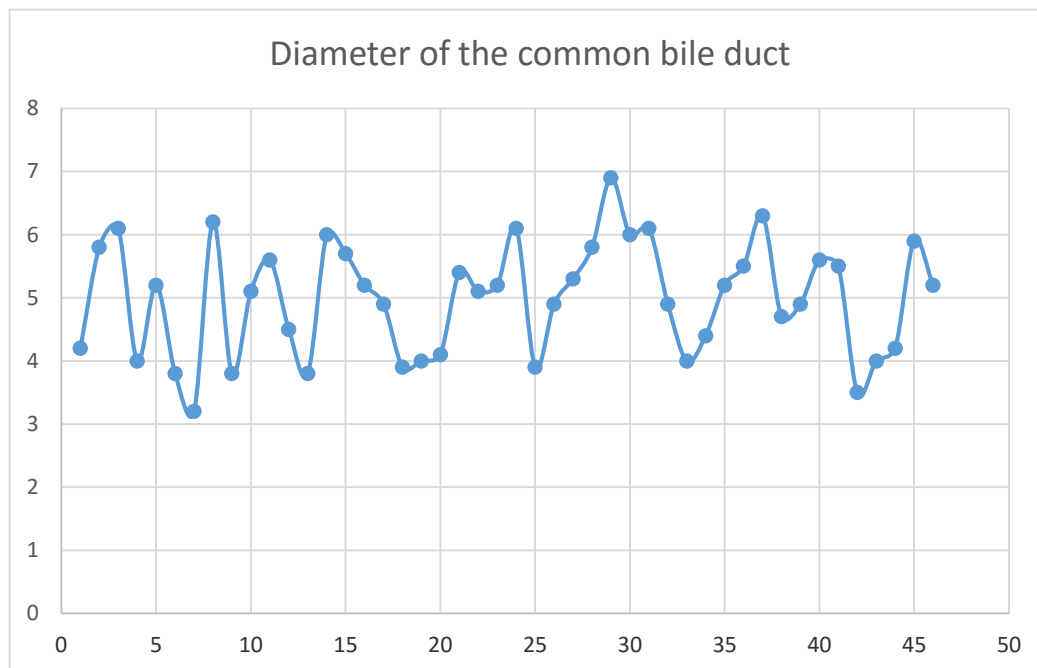


Fig. 1 – Diameter of the common bile duct

Dilated Wirsung duct was found in 18 patients (39,1%). In this case diameter of the pancreatic duct was $2,3 \pm 0,27$ mm. Although not definitive because of retrospective study design, the present data are timely and potentially can help guide management of these patients. But in many cases, the ultrasound examination shows no obvious etiology for the dilated ducts.

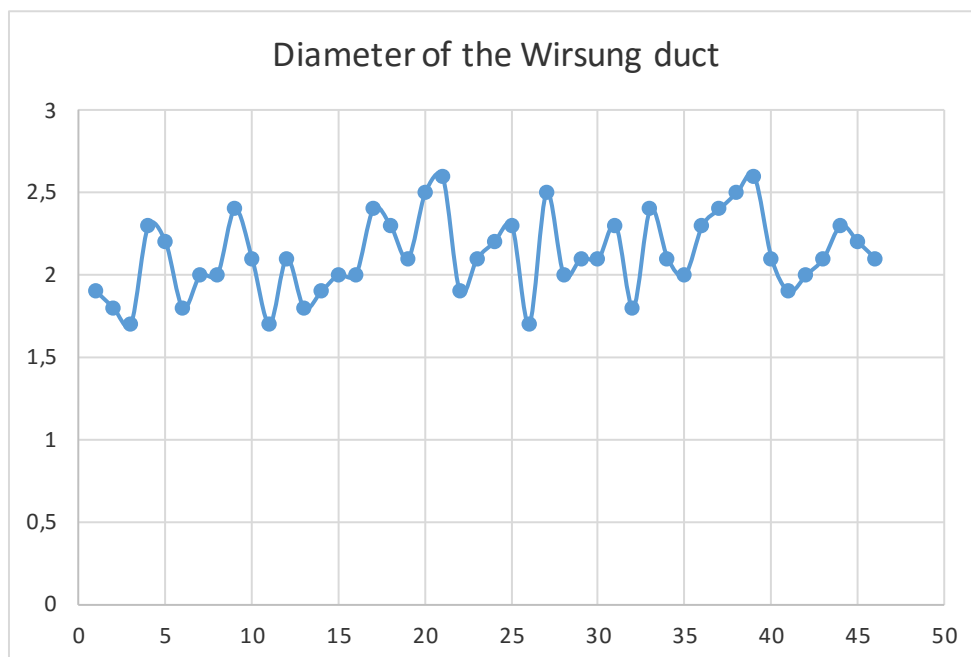


Fig. 2 – Diameter of the Wirsung duct

All patients with dilated Wirsung duct ($d > 2,0$ mm) had signs of acute or chronic pancreatitis. In the literature have reported a pancreatic duct dilation without the presence

of pancreatitis [3]. However, in our study, all patients with dilated pancreatic duct showed signs of chronic pancreatitis.

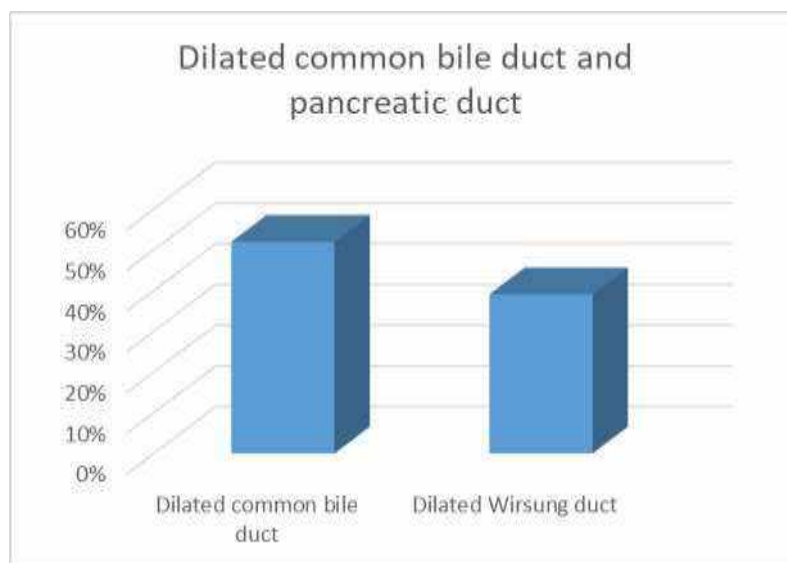


Fig. 3 – Dilated common bile duct and Wirsung duct

Conclusions:

1. Dilated common bile duct was found in 24 patients (52%), diameter was $5,8 \pm 1,39$.
2. Dilated Wirsung duct was found in 18 patients (39,1%). In this case diameter of the pancreatic duct was $2,3 \pm 0,27$ mm.
3. These finding suggest that cholelithiasis can cause dilation of the common bile duct and Wirsung duct, which can thereby cause chronic or acute pancreatitis.

Literature

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