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Cholesterolosis And Acute Pancreatitis: A Retrospective Study From A Large Cholecystectomy Database

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Background : Cholesterolosis is an accumulation of lipid-filled macrophages within the gallbladder lamina propria. A possible association between cholesterolosis and acute pancreatitis has been suggested. This study aims to examine the incidence of pancreatitis among patients with cholesterolosis in a cholecystectomy database.

Methods : Cholecystectomy histopathology between 3/1/2009 and 31/08/2019 were reviewed. Patients with a histopathological diagnosis of cholesterolosis were included in the study. Patient demographics including age and gender were collected. Gallbladder histology reports were analysed for the presence or absence of cholelithiasis, cholesterolosis, and other histological features, such as cholecystitis. Medical records were reviewed for additional clinical information, including presence of gallstones on pre-operative imaging, indication for surgery, and history of pancreatitis.

Results : 3496 cholecystectomies were performed between 3/1/2009 and 31/08/2019. Cholesterolosis was found in 495 (14.2%) gallbladder specimens. Most patients with cholesterolosis had concomitant cholelithiasis (478/495; 96.4%). 32 patients had cholesterol polyps 32/495 (6.5%). 16 of those with cholesterol polyps also had diffuse cholesterolosis (16/32; 50%). Of 469 patients with cholesterolosis and gallstones, 43 patients (43/469; 9.2%) had a history of pancreatitis. In most cases, the cholesterolosis was diffuse, although two patients with gallstone pancreatitis had cholesterol polyps (2/43; 4.7%). Of 26 patients with acalculous cholesterolosis, 5 patients (5/26; 19.2%) had pancreatitis. Two of these patients (2/5; 40%) had cholesterol polyps on histology.

Conclusions : It has been previously postulated that cholesterolosis can cause pancreatitis by micropolyposis similar to microlithiasis; in our study, patients with acalculous cholesterolosis were more likely to have had acute pancreatitis when compared to calculous cholesterolosis.

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