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Gallbladder polyps in PSC and rates of malignancy: time for a multicentre study?

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Introduction

The standardised mortality ratio of primary sclerosing cholangitis (PSC) is 3.55 (2.94-4.28) with most excess deaths due to malignancy[1]. Patient's with PSC may therefore undergo surveillance for multiple malignancies, with the British Society of Gastroenterology (BSG) 2019 guidelines on PSC recommending annual surveillance of the gallbladder to look for gallbladder polyps[2].

Gallbladder polyps are more often malignant in patients with PSC, and malignancy may occur in polyps < 1 cm [3, 4]. If polyps are identified, the BSG recommend that treatment is directed by a specialist HPB MDT (Figure 1), however criteria for their removal and definitive management plans are not established.

Aim

Single-centre retrospective audit of patients with PSC attending our Radiology unit for gallbladder surveillance ultrasound. The findings and histology of any cholecystectomies performed in patients with PSC were reviewed.

Patients and Methods

138 patients were identified from our PSC database. Their US surveillance rate between 2012-2022 was assessed against our standard that all patients should have an annual US of the gallbladder (100%).

Cross sectional imaging (MRI and CT) was deemed unsuitable for gallbladder surveillance and was excluded. The presence of polyps and their size was noted, and any cholecystectomies and subsequent histology reports were recorded.

Figure 1. Recommendation 26 from the 2019 BSG guidelines on PSC

> 26. We suggest that an annual ultrasound scan of the gallbladder should be performed in patients with PSC. If polyps are identified, treatment should be directed by specialist hepatopancreaticobiliary (HPB) MDM (*strength of recommendation: WEAK; quality of evidence: LOW*).

Results

Of the 138 patients only 9.4% (n=13) had regular and complete annual surveillance (one US per calendar year if eligible). The percentage of patients scanned increased from 28% in 2012 to 83% in 2022 (mean=66.1%, median (range) 68% (28%-90 %)). (Table1). Overall, 41% of eligible scans were performed over the 10-year time span.

7 patients (5%) with polyps were identified via US surveillance (age 27-74, 5 male). (Figure 2). Four patients underwent cholecystectomy for polyps: (mean size =17.3 mm; median (range) 14.5 mm (10-30mm)). Histology showed adenocarcinoma (n=3) or high-grade dysplasia (n=1). (Figure 3).

Polyps in three other patients (mean=4.7mm, median(range) 5 (4-7mm)) have not been excised . Cholecystectomies had been performed in 25 additional patients, predomimately as part of liver transplantations (n=14) or for benign pathology such as gallstone disease, and no incidental polyps were identified on macroscopic inspection.

Table 1. % of eligible scans that were performed each year

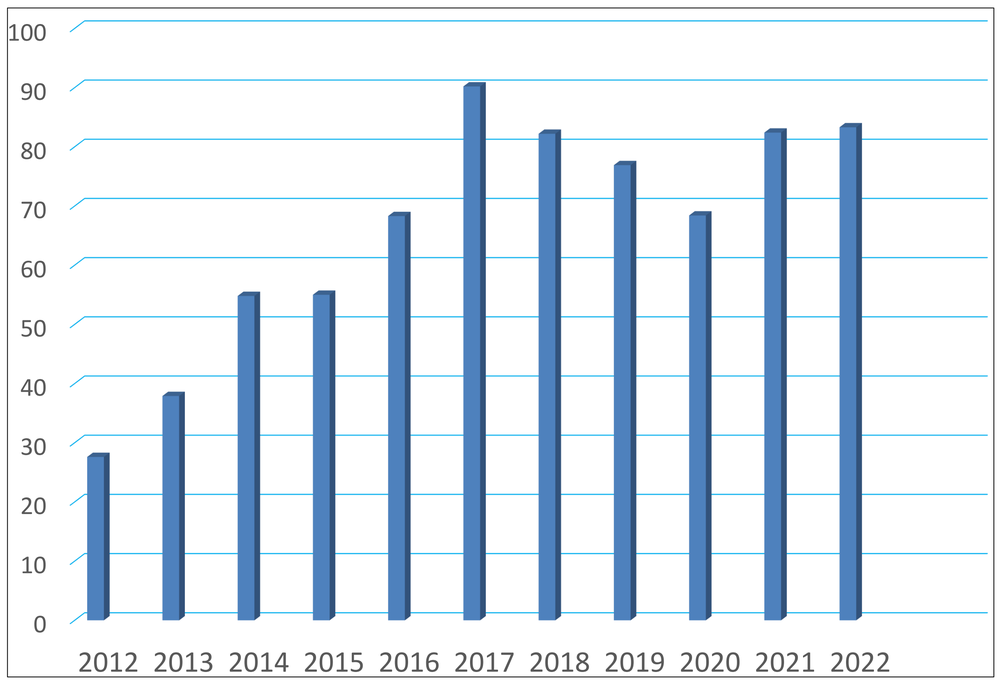


Figure 2. Image from an US demonstrating a polyp at the GB fundus

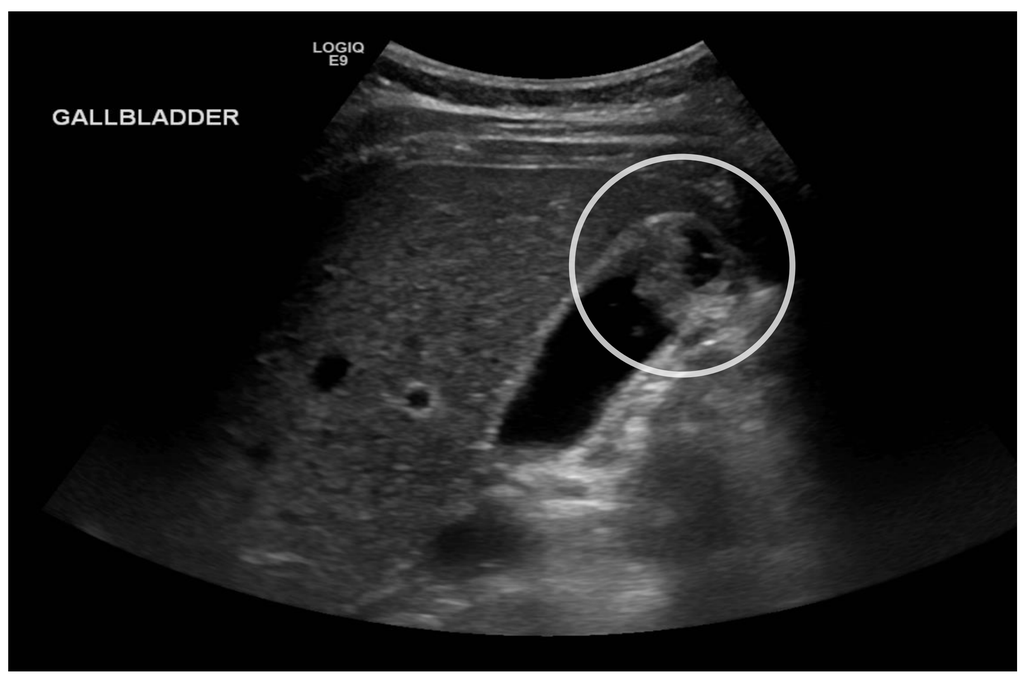
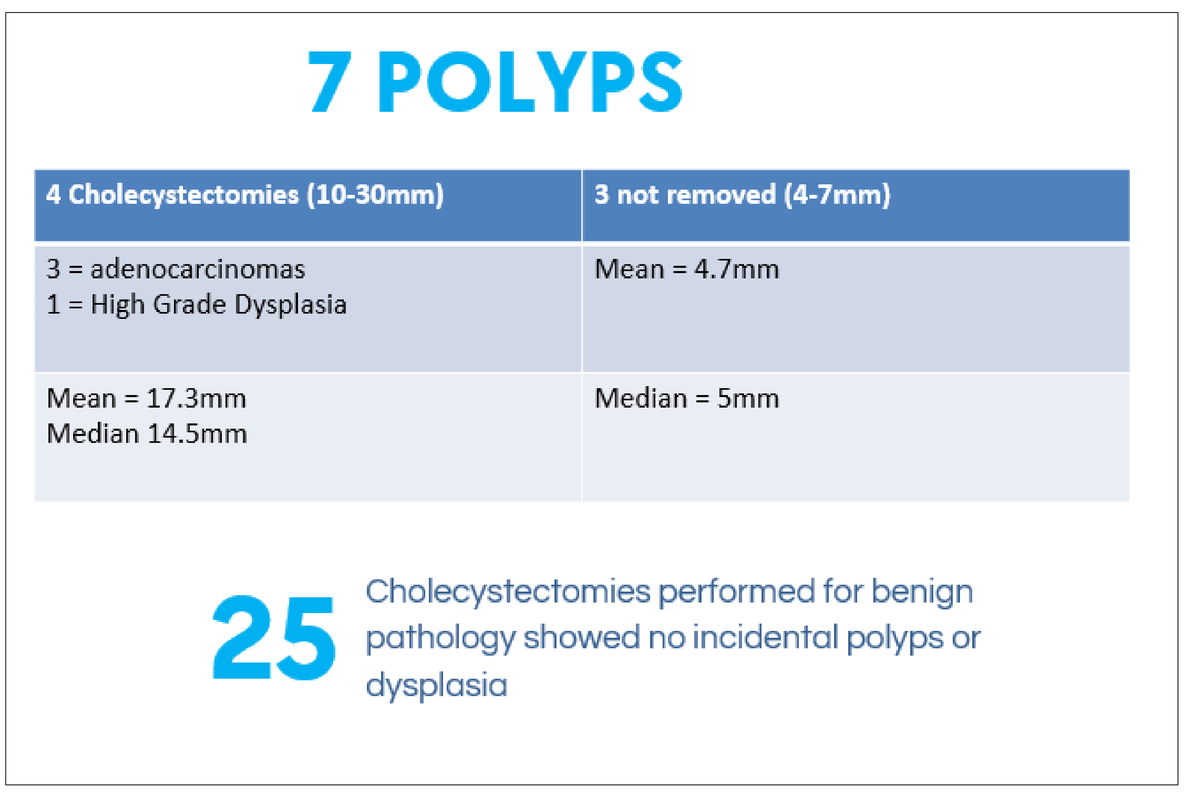


Figure 3. Polyp infographic



Conclusion

- Whilst improving, the surveillance of gallbladder polyps in PSC remains suboptimal
- Studies on the rates of malignancies within gallbladder polyps are almost always limited to single centre, retrospective, observational studies.
- Reported values for gallbladder polyp prevalence and rates of malignancy in patients with PSC have varied, as have recommendations regarding criteria for their removal.
- We suggest that a multicentre study on this topic would be of benefit for the PSC community, and help inform future practice and guidelines

1. Gleeson et al. Frontline Gastroenterology 2023; 2. Chapman et al. Gut 2019; 3. Leung et al. ANZ J Surg 2007; 4. Buckles et al. Am J Gastroenterol 2002.