

Introduction Endoscopic ultrasound (EUS) provides detailed examination of bile ducts where other imaging modalities have failed to identify an abnormality or when dilated ducts have been identified on imaging, but no cause found.

Aims/Background This audit reviews the results of focused EUS of the biliary tree performed in Tallaght hospital over a 16 month period.

Method Data was collected on patients who underwent EUS examinations of the biliary tree between October 2011 and February 2012. Patients with known pathology prior to EUS, like pancreatic mass or bile duct stone identified on prior imaging were excluded.

Results Of a total of 477 EUSs, 126 were focused diagnostic procedures for possible biliary pathology, 87 (69%) female and 39 (31%) male. Median age was 57.5 years. Indications were: 47 (37%) for abnormal bile ducts on imaging, 41 (32%) abdominal pain, 28 (22%) query gallstones, and 7 (9%) jaundice/abnormal liver function tests (LFTs). Patients were age stratified into group A (<60 years) and group B (>60 years). Chi-square test was used for statistical analysis. On EUS, Group A compared to group B had less dilated bile ducts (43% vs 61%, p 0.056), dilated pancreatic ducts (12% vs 17%, p 0.045) and less pathology (28% vs 51%, p 0.001). Patients with abnormal LFTs had more pathology compared to normal LFTs (48% vs 21.6%, p 0.002). Following age stratification, this was only significant in group A (38% vs 9%, p 0.004). Therefore, abnormal LFTs were a predictor of pathology in younger patients but not older ones. More pathology was diagnosed in patients with dilated bile ducts on EUS who did not have previous cholecystectomy, regardless of age (19% vs 76%, p <0.001). Duodenal diverticulum was diagnosed in 4 patients in group B. This is likely under diagnosed due to diagnostic limitations of EUS.

Conclusion EUS is high yield in young patients with abnormal LFTs and older patients regardless of LFTs when their presentation suggests biliary tree disease. The corollary is that young patients with normal LFTs are unlikely to have pathology. Investigators should be vigilant of periampullary diverticuli (Lemmel's syndrome) in older patients with unexplained bile duct dilatation.