

Endoscopic Retrograde Cholangiopancreatography (ERCP) versus Endoscopic Ultrasound (EUS): Diagnostic Accuracy and Delay in Biliary Tract Malignancy – A Retrospective Analysis

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Abstract:

Introduction: ERCP is commonly used to investigate biliary tract malignancy but often lacks sensitivity, necessitating further procedures such as EUS. EUS-guided fine-needle aspiration (FNA) or biopsy (FNB) offers a more targeted approach. Most UK trusts use ERCP as a first-line investigation, with EUS reserved for inconclusive cases. This study compares the diagnostic accuracy of ERCP (brushings/biopsy) with EUS-guided FNA/FNB.

Methods: A retrospective review was conducted using records from University Hospital Coventry and Warwickshire (UHCW), examining 164 patients evaluated for biliary malignancy between 09/08/2021 and 22/07/2024. Data included diagnostic timelines, methods, and histological outcomes.

Results: ERCP was the initial procedure in 160 patients; only 2 had primary EUS. Of the 160 ERCP patients, 60 (38%) required additional EUS due to inconclusive results. Among them, EUS diagnosed 42 cases (70%). However, only 33 (55%) had EUS scheduled while awaiting ERCP results. Of 164 patients, 55 were confirmed to have malignancy, mostly adenocarcinomas. ERCP diagnosed 33 cases (60%), EUS 8 (15%), and both combined in 4 (7%). The rest were diagnosed through surgery or other means.

Conclusion: The study highlights EUS as a valuable adjunct to ERCP, particularly when initial results are inconclusive. It suggests re-evaluating current diagnostic pathways, potentially using EUS as a first-line investigation. Proactively scheduling EUS in anticipation of inconclusive ERCP could reduce delays and improve patient care.