


LIVER ENZYMES AS PREDICTORS OF CHOLEDOCHOLITHIASIS: A SCOPING REVIEW

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Liver enzymes alone are unreliable predictors of choledocholithiasis




INTRODUCTION

- Cholelithiasis with concurrent bile duct stones continues to provide diagnostic and operative challenges and contributes to morbidity
- This study aims to identify the role of liver function tests (LFTs) as a non-invasive method of predicting choledocholithiasis.




MATERIALS and METHODS

- A scoping review of studies from January 2011 to November 2021 was done.
- Five themes: bilirubin, other LFTs, ASGE guidelines, repeat LFTs, inflammatory markers were identified.



RESULTS

- 25 articles reviewed.
- Bilirubin significant in eight articles, cut-offs 1.2 to >4 mg/dL.
- GGT, ALP, AST, and ALT significant in multiple studies, cut-offs varied.
- Four studies found bilirubin not significant.
- ASGE guidelines led to >40% unnecessary ERCPs.
- Repeat LFTs had mixed results; some showed correlation with choledocholithiasis.



DISCUSSION/ CONCLUSION

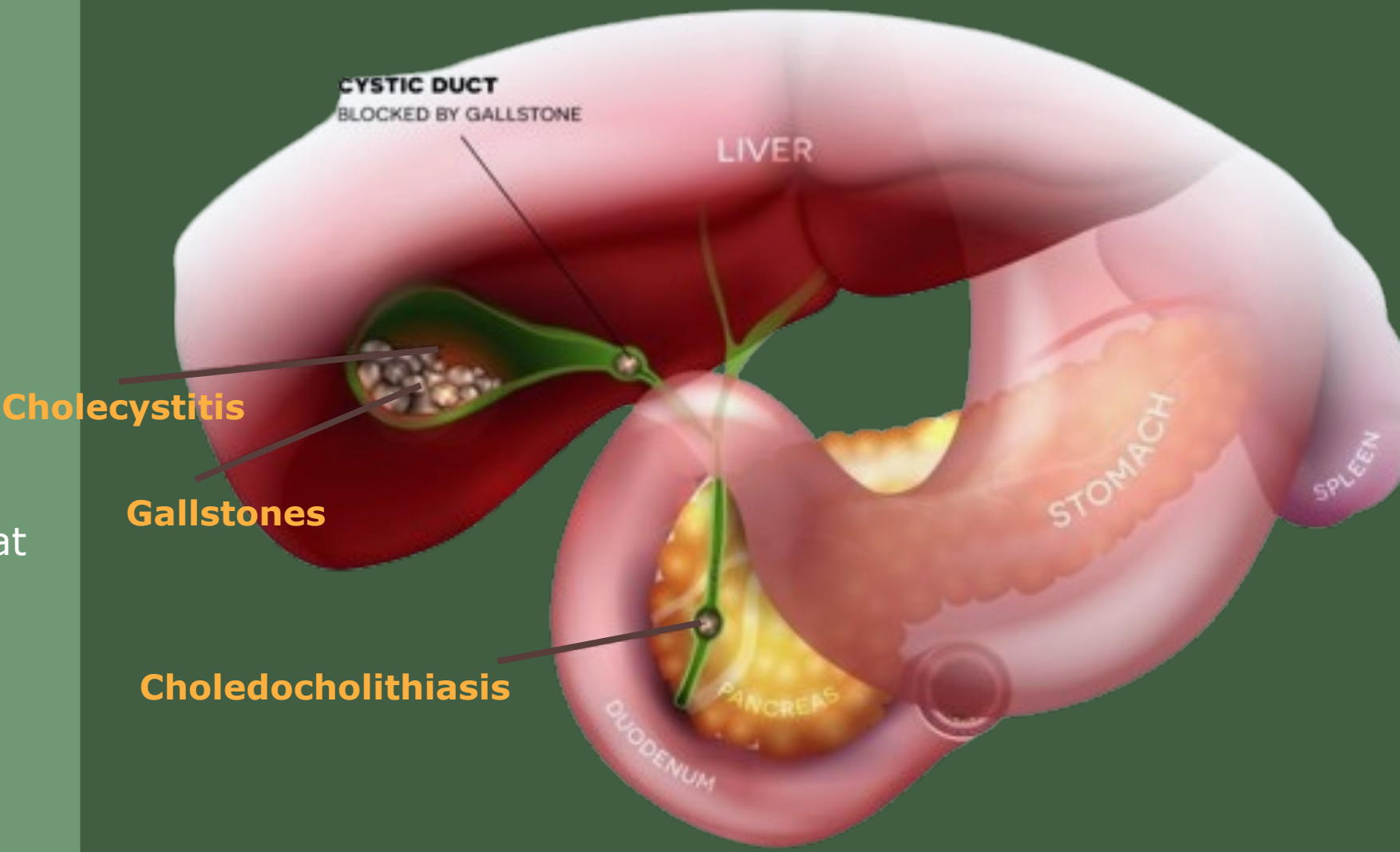
- LFTs continue to disappoint as sole predictors of choledocholithiasis.
- They should be used alongside clinical and radiological findings.

KEY FINDINGS

The included studies showed **heterogenous parameters** and results, with **modest utility** for LFTs in predicting choledocholithiasis and **no consistent cut-off values**

WHAT IS KNEW?

19% and **14%** of articles respectively reported **bilirubin** and **other liver function tests** to **not be** statistically significant **predictors** of choledocholithiasis



Summary **table** of statistically significant liver function tests (not including bilirubin).

Predictor cut-off level	
GGT (IU/L)†	>64, >224, >350
ALP (IU/L)†	>100, >103, >108, >116, >120, >138, >190, >250, >400
AST (IU/L)†	>40, >90, >106, >160
ALT (IU/L)†	>102, >105, >320, ≥700, >750

† GGT indicates gamma-glutamyl transferase; ALP, alkaline phosphatase; AST, aspartate aminotransferase; ALT, alanine aminotransferase;

“Cost and resource constraints can limit access to advanced imaging such as MRCP, whilst invasive methods like the ERCP carry high risk of complications”



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