Biliary Colic: A True Diagnosis or a Symptomatic Descriptor?

Alexis Nichols, Inaara Malick, Levi Peppel; SreyRam Kuy MD, Konstantinos Makris MD, Derek Erstad MD, Eugene Choi MD, Samir Awad MD, Christy Chai MD / Michael E DeBakey Department of Surgery, Baylor College of Medicine, Houston TX
Michael E DeBakey VA Medical Center, Houston TX

Introduction

- Biliary colic is characterized by right upper quadrant (RUQ) abdominal pain, and is often associated with gallstones without evidence of infection
- Ultrasound is often used in initial evaluation of RUQ pain to rule out cholecystitis or other etiologies
- **In this study, our objective was to analyze the diagnostic imaging modalities used and concordance between pre-operative diagnosis and post-operative histologic diagnosis in patients presenting with suspected biliary colic**

Methods

- Retrospective analysis of patients who underwent cholecystectomies at a single center between January 2021 and December 2022
- Analyzed patient demographics, preoperative ultrasound, pre-operative diagnosis per operative note, and post-operative histologic findings.
- Preoperative diagnosis was compared to histologic diagnosis

Results

Table 1. Patient Demographics

Patient Demographics	
Age	62 [23-89]
Men	168 (78.9%)

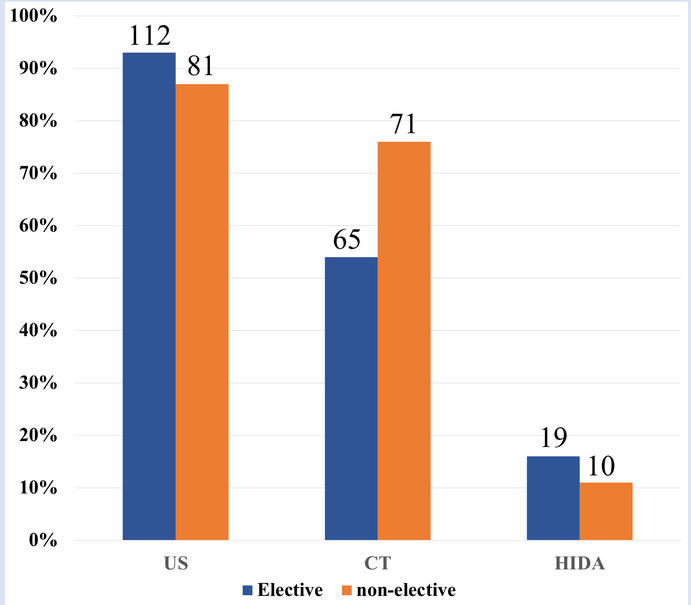
Table 2. Diagnostic Imaging Modalities

	Elective	Non-elective
US	93%	87%
CT	54%	76%
HIDA	16%	11%

Table 3. Pre-operative and Post-operative Diagnoses

	Elective Cholecystectomy N = 120 (56%)	Non-elective Cholecystectomy N = 93 (44%)
Biliary Colic (Pre-op)	67 (56%)	11 (12%)
Post-operative Histologic Diagnoses	N = 67	N = 11
Acute and/or chronic cholecystitis	62 (92%)	10 (91%)
Cholelithiasis	3 (4.5%)	-
Adenomyosis	1 (1.5%)	1 (9%)
Normal Gallbladder	1 (1.5%)	-

Figure 1. Diagnostic Imaging Modalities



Conclusion

- Though ultrasound is effective for diagnosis of cholelithiasis, our results suggest that ultrasound has a significant false negative rate for diagnosis of cholecystitis*
- False negative rate was 92% and 91% in elective and nonelective cases, respectively
- Our findings suggest that many patients diagnosed with biliary colic are afflicted by cholecystitis
- This study highlights the potential benefit of recommending early cholecystectomy in elective settings and oral antibiotics as an adjunct to supportive care in the outpatient setting

References

* Hwang, H., Marsh, I., & Doyle, J. (2014). Does ultrasonography accurately diagnose acute cholecystitis? improving diagnostic accuracy based on a review at a Regional Hospital. *Canadian Journal of Surgery*, *57*(3), 162–168. https://doi.org/10.1503/cjs.027312