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MIDWEST SURGICAL ASSOCIATION

8. HOTTER THAN IT LOOKS: CHOLECYSTITIS IS MORE COMMON THAN IMAGING STUDIES INDICATE

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Background: Patients presenting to the Emergency Department (ED) with presumed biliary colic are typically referred for outpatient management. The relatively low sensitivity of ultrasound and computed tomography to identify cholecystitis may result in patients with this pathology being inappropriately sent home. We hypothesize that most patients with appropriate clinical symptoms, but negative or equivocal imaging have unrecognized cholecystitis and evaluation by an established Acute Care Surgery (ACS) team results in a timely laparoscopic cholecystectomy (LC) with low complication rates.

Methods: A retrospective review of patients who presented to the ED and then proceeded to the operating room for laparoscopic cholecystectomy (LC) between January 2015 and January 2019 was completed. Only patients with negative or equivocal imaging were included. Negative imaging was defined as no wall thickness or pericholecystic fluid +/- cholelithiasis. The primary outcome was the incidence of acute and chronic cholecystitis on final pathology.

Results: A total of 257 patients underwent LC. Pathology demonstrated acute, chronic, necrotizing, or subacute cholecystitis in 84.8% (n=218) of patients. Only 16.5% (n=38) patients had cholelithiasis without cholecystitis on pathology. There were 167 (65%) negative and 90 (35%) equivocal imaging studies. The incidence of cholecystitis was similar in negative and equivocal imaging (85% vs. 84.4%; p=1.00). The median time from admission to operating room was 11.8 hours (IQR 6.6-17.9 hours) and hospital LOS was 0.49 days (IQR 0-1.25 days). Almost half of patients (39.3%, n=101) had a previous visit to the ED for a similar complaint, 29.6% were previously referred to a surgeon, and 12.8% had a history of consultation with a surgeon. There was only one conversion to open cholecystectomy and 3.1% (n=8) of patients experienced a severe complication (Clavien-Dindo > Grade III).

Conclusion: This study confirms that there is a high incidence of cholecystitis on pathology in patients with negative or equivocal imaging. These patients warrant a general surgery consult and may benefit from LC in the acute care setting. Furthermore, this population of patients undergo expeditious surgical intervention with an exceedingly short length of stay. Surgical assessment in the ED is essential to determining whether patients are cholecystectomy candidates.

Demographics & Clinical Characteristics	
Age: years (IQR)	35.0 [28.0;48.0]
Sex:	
Female	204 (79.4%)
Male	53 (20.6%)
BMI	32.6 [28.0;37.7]
Murphy's Sign:	
Negative	31 (12.8%)
None Documented	122 (50.4%)
Positive	89 (36.8%)
WBC (IQR)	9.36 [7.49;11.6]
Alk. Phosphatase (IQR)	77.0 [63.0;99.0]
ALT (IQR)	24.0 [16.0;46.0]
AST (IQR)	24.0 [18.0;47.0]
Bilirubin (IQR)	0.40 [0.30;0.60]