



JUST PUT IT IN THE BAG: IS ACS THE ONE-STOP SHOP FOR RESIDENT CHOLECYSTECTOMY TRAINING?

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Introduction

The number of required biliary procedures in general surgery training has recently increased. Adequate cholecystectomy (CHOLE) training is critical. The objective of our study was to identify which surgical services contributed to CHOLE training and to highlight differences between teams.

Methods

We used single-institution self-reported ACGME resident case logs from academic years 2013-18 to identify 690 CHOLE for study. We compared techniques, operative times, diagnoses, comorbidities, and conversion rates by surgical team (acute care surgery (ACS) vs non-ACS).

Results

- Majority (60.4%) of CHOLE occurred on the ACS service (Fig 2).
- The referral source was the ED in 82.8% of ACS vs outpatient in 61.4% for non-ACS cases ($p < 0.001$).
- Diagnoses differed (Fig 1) with more acute cholecystitis (47.3% vs 6.1%), choledocholithiasis (10.4% vs 2.5%), and gallstone pancreatitis (11.4% vs 4.3%) on ACS and more symptomatic cholelithiasis on non-ACS services (46.8% vs 18.9%) ($p < 0.001$).
- Operative times were shorter for ACS (1:56 vs 2:09, $p = 0.016$) but conversion rates were similar (ACS 4.6% vs. non-ACS 3.6%, $p = \text{NS}$).
- More non-ACS cases were robotic (31.7% vs 5.8%, $p < 0.001$).

- Intraoperative cholangiography was performed in more ACS CHOLE (37.6% vs. 23.0%) and indocyanine green cholangiography was performed in more non-ACS CHOLE (16.2% vs. 3.9%) with overall $p < 0.001$.
- More ACS CHOLE required ERCP during the same admission (24.0% vs 8.3%, $p < 0.001$).
- Patients on all services had similar ASA and BMI.
- Most cases were performed by PGY4 and 5 residents, with graduating 2018 chiefs logging 58.2 ± 16.2 CHOLE and 20.2 ± 4.8 cholangiograms.

Discussion

General surgery residents rely on the ACS service for the majority of their CHOLE experience. Limitations included: ACGME case logs from resident logs have potential for inaccurate logging. This is only a single snapshot for a cohort of residents in one academic year at a single training program. The CHOLEs performed on ACS are more acute, more complex, and generally require hospitalization along with care coordination. The ACS CHOLEs are more often done by senior residents. These complex cases illustrate the importance of ACS services in the training of general surgeons who can safely care for a wide variety of acute and chronic biliary pathology.

Fig 1. Cholecystectomy by Diagnoses.

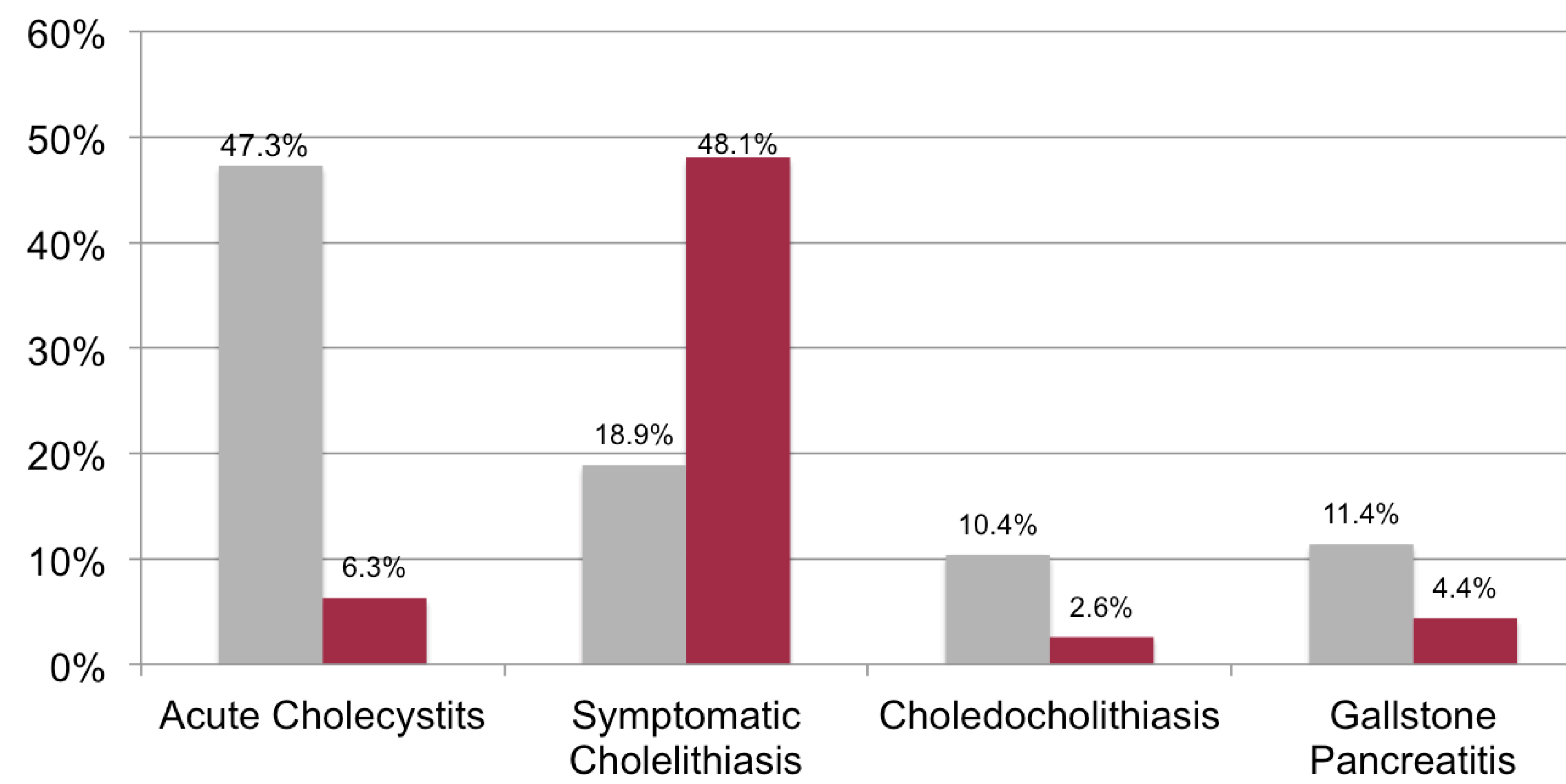


Fig 2. Cholecystectomy by Service.

