IMPACT OF LAPAROSCOPY ON TRAINING: ARE OPEN APPENDECTOMY AND CHOLECYSTECTOMY ON THE BRINK OF EXTINCTION?

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Disclosures
• No financial disclosures

Background
• The surgical experience of present-day surgery residency training has evolved from the contributions of laparoscopic surgery
• Some traditionally open procedures are now more descriptive and less of a familiarity to many general surgery residents (GSR)
• We hypothesize that GSR open operative experiences, specifically appendectomies and cholecystectomies, are insufficient compared to the gold standard of laparoscopy today

Methods
• Retrospective, single-center, consecutive cohort study
• Identified from the hospital ACS-NSQIP database
• All operative procedures involving the appendix and gallbladder over a 30-month period
• All PGY level GSR operative experience was recorded
• Designated preliminary interns and any operative cases completed without a GSR were excluded from the study

Results
• 635 total appendix and gallbladder surgical procedures identified
  • Appendectomies:
    • 285 laparoscopic (95.6%)
    • 13 converted to open (4.3%) for perforated gangrenous appendicitis
    • Rocky-Davis: 15%, Lower-midline: 84.6%
  • Cholecystectomies:
    • 292 laparoscopic (86.6%)
    • 14 (4%) with cholangiogram
    • 45 open (13.3%)
    • 37 open, 6 conversions, 2 CBD exploration
  • Majority of cases were completed as inpatient (83.6%) by acute care surgeons
  • 20 different GSR involved with procedures

Surgical Procedures

- Laparoscopic Appendectomy: 285 (44.8)
- Open Appendectomy: 13 (2)
- Laparoscopic Cholecystectomy: 278 (43.7)
- Open Cholecystectomy: 45 (7)
- Laparoscopic to Open: 6 (1)
- Open with CBD exploration: 2 (0.3)

Surgical Procedures by PGY

- PGY 1: Lap Appy: 32, Open Appy: 1
- PGY 2: Lap Appy: 74, Open Appy: 7
- PGY 3: Lap Appy: 106, Open Appy: 11
- PGY 4: Lap Appy: 48, Open Appy: 4
- PGY 5: Lap Appy: 25, Open Appy: 3
- Multi-PGY: Lap Appy: 35, Open Appy: 3
Conclusions

- General surgery residents have unequal operative experience for case-specific open procedures
- A competency-based system to demonstrate a resident’s hands-on surgical skill is fundamental to residency training and should be considered for specific types of low-volume open surgical cases

Thank You!