

## **CURRENT MANAGEMENT OF APPENDICITIS AT A COMMUNITY CENTRE- HOW CAN WE IMPROVE?**

Hannah G. Piper, MD, Conrad Rusnak, MD, William Orrom, MD, Allen Hayashi, MD, Johann Cunningham, MD

Department of Surgery, Vancouver, BC, Canada

**Background:** Although appendicitis is the most common surgical condition in adults and children, controversy exists regarding pre-operative imaging, laparoscopy vs. open management and timing of surgery. This study reviews practices at a community centre and compares outcomes with published standards.

**Methods:** A retrospective review of patients undergoing appendectomy in Victoria, BC from January to July 2006 was performed. Outcomes analyzed included: Accuracy of pre-operative imaging, time from ER to OR, length of stay (LOS) and early complications. Patients with and without perforation were compared using sample t-tests.

**Results:** 134 patients were included in the study. The overall negative appendectomy rate was 9%. Pre-operative CT scans were obtained for 101 (75%) patients with a false positive rate of 3%. The average time from the ER to the OR was 11.8 hours (range 2-24 hours). This was not significantly different for patients with perforation (11.1 hours) or with pre-operative imaging (10.9 hours). Twenty patients (15%) had perforated appendicitis as confirmed by pathology. Sixty-five percent of patients with perforation had laparoscopic surgery with an average LOS of  $4.4 \pm 3.3$  days compared to 83% of patients without perforation with an average LOS of  $1.5 \pm 0.8$  days. The average LOS was  $6.3 \pm 2.6$  days vs.  $1.6 \pm 1.0$  days for patients with and without perforation who had open appendectomies. Seven patients (5%) had post operative complications, five of whom had perforated appendicitis with surgical site infection being the most common complication.

**Conclusions:** Reliance on CT scans results in fewer negative appendectomies but greater exposure to radiation. There was no correlation between waiting time and perforation rate or pre-operative imaging. The majority of appendectomies were performed laparoscopically even when perforated. Efforts should be made to identify appendicitis early as perforated appendicitis resulted in increased post-operative complications and longer hospitalizations.