A PRACTICAL CLASSIFICATION OF ACUTE APPENDICITIS BASED ON STANDARDIZED LAPAROSCOPIC FINDINGS

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INTRODUCTION

Currently no laparoscopic classification of acute appendicitis is widely accepted and so a universal system should be adopted to help surgeons describe surgical findings associated to outcomes. The aim of this study is to present a laparoscopic severity classification system for acute appendicitis.

METHODS

- Retrospective matched cohort study
- July 2008 and December 2017
- Single institutional center in a third-level Hospital in Bogotá, Colombia
- Laparoscopic exploration:
  - Presence and characteristics of intraperitoneal fluid
  - Appendix appearance and localization,
  - Occurrence of phlegmon, inflammatory mass or abscess
  - Difficulty dissection
  - Appendiceal stump and cecum viability

- VARIABLES:
  - Time to oral intake
  - Length of hospital stay
  - Operative time

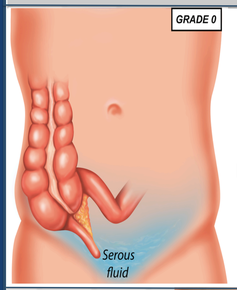
- Complication rate categorized by the Accordion System.

n=331

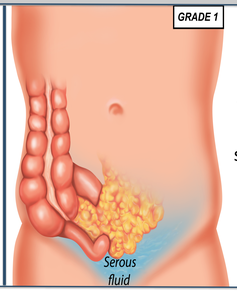
After correcting for confounders (age and gender) and pruning of 100 observation across all groups.

LAPAROSCOPIC CLASSIFICATION FOR ACUTE APPENDICITIS

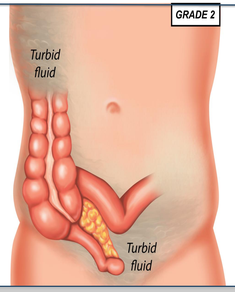
Non-complicated Acute Appendicitis (NCAA)



Grade 0: Rigid appendix with edema and prominent vessels. Serous fluid might be present

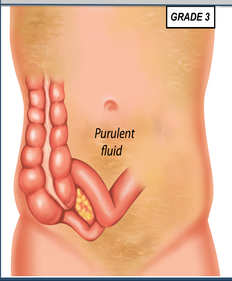


Grade 1: Appendix with fibrinous exudate and/or acute inflammatory phlegmon easily separated with blunt dissection. Serous fluid, small bowel wall edema/erythema might be present

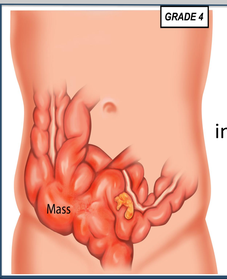


Grade 2: Non-serous fluid (turbid) in the right paracolic gutter and/or pelvis, regardless of appendix inflammatory process. (Fecalith, local spilling and small bowel wall edema/**erythema and** dilation might be present).

Complicated Acute Appendicitis (CAA)



Grade 3: Purulent fluid is found in three or four abdominal quadrants, regardless of appendix inflammatory process



Grade 4: Appendicular inflammatory mass difficult to dissect from neighboring structures and/or abscess

RESULTS

Fig 1. Violin Plot: Operative time vs. grading system

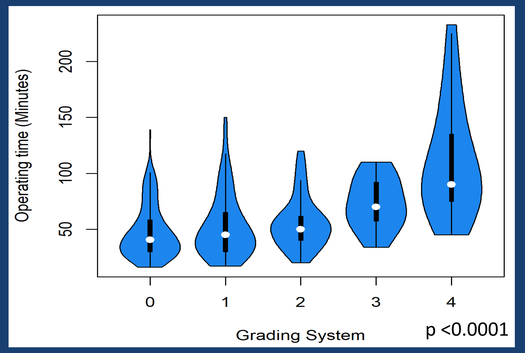
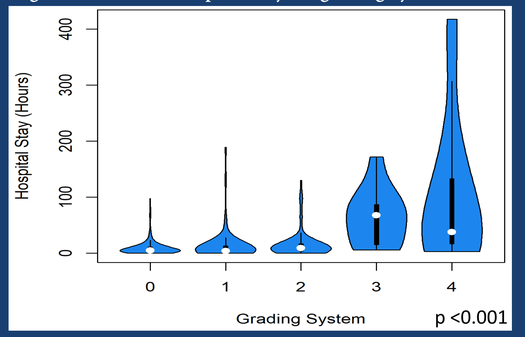


Fig 2. Violin Plot: Hospital stay vs. grading system



In the NCAA group, one patient had an early wound dehiscence and underwent immediate reoperation. Fourteen percent (n=4) of patients in CAA group experienced postoperative ileus that required gastric decompression. Also in this group, two deep abscesses were recorded.

CONCLUSION

Acute appendicitis can be graded based on a simple laparoscopic classification giving essential information that can help the surgeon prepare for possible complications, communicate more consistently with the surgical team and the patients, and predict postoperative outcomes Further validation studies are warranted.