

SURGICAL VERSUS CONSERVATIVE MANAGEMENT OF ACUTE APPENDICITIS DURING THE COVID-19 PANDEMIC

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Abstract

Background: We aim to analyse the management of patients presenting with AA to our institution during the first wave of the pandemic, comparing surgically and conservatively managed patients

Method: Patients were categorised into surgically and conservatively managed groups. The primary outcome was the complication rate (post-operative complications vs failure of antibiotic treatment) and the secondary outcomes were length of hospital stay and Alvarado score.

Results: Higher complication rates were observed amongst the conservatively managed group, although not found to be statistically significant (16.67% vs 34.78%; $p > 0.05$). There was no significant difference in length of hospital stay observed between the two groups (surgical: 2.31 ± 1.02 days vs conservative: 2.62 ± 1.12 days).

Conclusions: COVID-19 has led to a significant cohort of conservatively managed AA patients. We propose a stratification pathway based on clinical severity, Alvarado score and imaging to facilitate safe selection for conservative management of AA, in order to reduce failure of treatment rates in this patient group.

Keywords: Appendectomy, Appendicitis, Conservative, Coronavirus

Introduction

Acute appendicitis is still the most frequent cause of acute abdomen in young patients. Its peak incidence occurs in the 20s and 30s, and there is a slight predominance of men over women. Despite its simple clinical diagnosis, with or without the use of scores, radiological advances and the possibility of a laparoscopic approach, 20-30% of cases of appendicitis are reported to be gangrenous or perforated, due to delays either in requesting help or in the diagnosis itself, with the resulting increase in associated morbidity and mortality.¹⁻²

Additionally, in relation to subclinical presentation and especially in older patients, up to 10% of patients are diagnosed with an appendiceal mass. Numerous studies have supported an initial conservative therapeutic approach with antibiotics for acute appendicitis with a late onset in the form of an abscess or phlegmon, together with percutaneous drainage if required. Nonetheless, evidence

also exists for an urgent surgical approach of this condition in terms of safety and cost-effectiveness.³

Material and Methods

Type of study-Retrospective study

Inclusion criteria- Acute appendicitis Patients admitted in our hospital after first wave of COVID-19.

Exclusion criteria- Patients record were not available.

All patients presenting to our centre with AA were included. Six-month follow-up data were collected retrospectively using records. Patients were categorised into surgically and conservatively managed groups. The primary outcome was the complication rate (post-operative complications vs failure of antibiotic treatment) and the secondary outcomes were length of hospital stay and Alvarado score.

Results

Table 1: Outcome

Outcome	Conservative group (n=46)	Surgical group (n=54)	p-value
Hospital stay	2.62 ± 1.12 days	2.31 ± 1.02 days	> 0.05
Complication rate	34.78%		

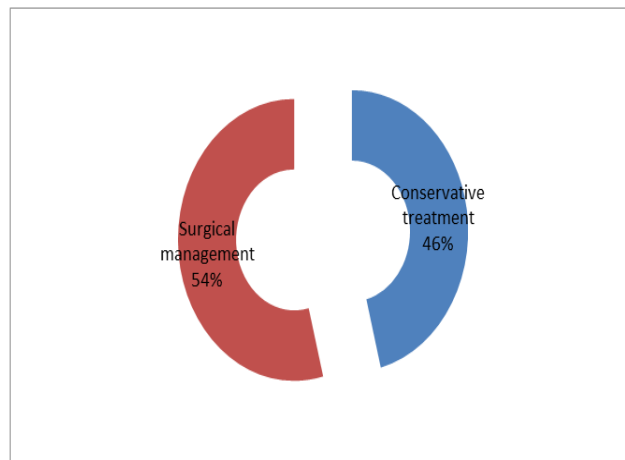


Figure 1

Hundred patients (n=100) were admitted with AA, 46.00% (n=46) managed conservatively compared to 54.00% (n=54) treated surgically.

Higher complication rates were observed amongst the conservatively managed group, although not found to be statistically significant (16.67% vs 34.78%; $p > 0.05$). There was no significant difference in length of hospital stay observed between the two groups (surgical: 2.31 ± 1.02 days vs conservative: 2.62 ± 1.12 days). White cell count (WCC) and Alvarado score were higher on admission in the surgical group with statistical significance ($p < 0.01$ and $p < 0.01$ respectively).

Discussion

The paucity of evidence explains the continuity of the debate about the ideal therapeutic approach for acute complicated appendicitis. The main arguments against an initial conservative approach are based on the potential recurrence of symptoms and consequent readmission with an increased overall hospital stay, in the chance to rule out any underlying malignant disorder and that an immediate surgical solution proves definitive, as well as being safe and cost-effective, and is also possible by a laparoscopic approach.⁴

Numerous studies have shown that recurrence after conservative treatment in patients with an appendicular mass is low and that the need for deferred appendectomy should not be generalized, just being indicated according to disease progression. In our study, however, the rate of recurrence of symptoms after initial conservative treatment was higher. This finding, from a small sample of patients, should not be interpreted as indicative of the need for systematic deferred appendectomy but rather as an indication for the follow-up and monitoring of patients with conservative treatment after hospital discharge. The findings of our study do, however, suggest the need to

prioritize the programming of deferred appendectomy in indicated patients (symptomatic recurrence) as a measure to avoid further inflammatory attacks.⁵

Conclusion

COVID-19 has led to a significant cohort of conservatively managed AA patients. We propose a stratification pathway based on clinical severity, Alvarado score and imaging to facilitate safe selection for conservative management of AA, in order to reduce failure of treatment rates in this patient group.

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