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Original Research Article

Clinical Presentation, Management, and Treatment Outcomes of Acute Appendicitis: A Retrospective Study at BMIMS, Pawapuri

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Abstract:

Background: Acute appendicitis is a common surgical emergency with variable clinical presentation and outcomes. Early diagnosis and appropriate management are essential to prevent complications.

Aim: To evaluate the clinical presentation, diagnostic findings, management approaches, and treatment outcomes of patients with acute appendicitis at BMIMS, Pawapuri.

Methodology: A retrospective observational study was conducted in the Department of General Surgery, BMIMS, Pawapuri, over one year. Records of 80 patients aged ≥18 years with acute appendicitis were reviewed. Demographic, clinical, diagnostic, management, operative, and outcome-related data were collected and analysed using IBM SPSS Statistics version 27.0.

Results: Abdominal pain (100%) and right lower quadrant tenderness (90%) were the predominant findings. Most patients (75%) presented within 48 hours. Ultrasonography was suggestive of appendicitis in 72.5%, while 47.5% had a high Alvarado score. Surgical management was performed in 82.5%, including laparoscopic appendectomy in 60%. Uncomplicated inflammation was the commonest operative finding (63.6%). Most patients (57.5%) were discharged within three days, 76.3% had no postoperative complications, and 96.3% recovered and were discharged.

Conclusion: Acute appendicitis showed predominantly favourable outcomes with timely diagnosis and appropriate management.

Keywords: Acute Appendicitis, Clinical Presentation, Appendectomy, Laparoscopy, Treatment Outcomes, Retrospective Study.

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Introduction

Acute appendicitis is one of the most frequent causes of acute abdominal pain, and is still a significant reason for emergency surgical admission, world-wide [1]. It is caused by an inflammation of the vermiform appendix and can develop into gangrene, perforation, abscess, peritonitis, sepsis and, if left untreated, death. The disease is known to occur in patients of all ages, but is more common in adolescents and young adults. The burden of appendicitis on healthcare systems has been shown recently in the world, and each year millions of new cases have been reported in various parts of the world. While advances in the diagnosis and emergency surgical treatment have helped to decrease mortality, there are still significant differences in incidence, presentation, access to timely treatment, and clinical outcomes in different populations [2].

Clinical findings in acute appendicitis are variable and could vary with age, position of appendix, nature of the illness and absence or presence of complications [3]. The typical clinical picture is of poorly localized pain around the umbilicus or epigastrium followed by right lower quadrant pain, anorexia, nausea and low-grade fever. On physical examination, tenderness and guarding of the right iliac fossa, rebound tenderness, and other features of focal peritoneal irritation may be noted. However, the classic symptom progression is not always present and some atypical presentations are especially frequent in children, elderly, pregnant women and those with variants of appendiceal position. Therefore, there is a risk of misdiagnosis, missed diagnosis, or over-diagnosis (and over-surgery) if clinical symptoms are used as the sole diagnostic criteria.

Laboratory investigations offer supportive evidence to be used in the evaluation of suspected acute appendicitis. Laboratory findings are often consistent with leukocytosis and neutrophilia with elevated inflammatory markers like C-reactive protein; normal laboratory tests do not rule out the disease [4]. Multiple clinical scoring systems have been created, such as an Alvarado Score or Appendicitis Inflammatory Response score, which incorporate symptoms, physical examination characteristics and laboratory values to enhance diagnostic stratification. Imaging has also helped to improve the accuracy of diagnosis. Since computed tomography does not use ionizing radiation and is relatively available, it is useful in the diagnosis of complications like perforation, abscess, or periappendiceal inflammation, which are not seen in ultrasonography, whereas others have high diagnostic accuracy in adults, making ultrasonography more useful [5]. However, the type of imaging modality may be related to patient factors, availability, clinical suspicion, and institutional resources.

Acute appendicitis may simply be designated as uncomplicated and complicated disease. Complicated appendicitis is when the inflammation is complicated by gangrene, perforation, periappendiceal abscess, phlegmon, or generalized peritonitis [6], while uncomplicated appendicitis consists of localized inflammation without any of these complications. This distinction is clinically significant as it impacts selection of treatment, length of hospital stay, need for antibiotics, postoperative morbidity and prognosis. The delayed presentation is important as a cause of complicated disease as progressive inflammation may lead to tissue necrosis and perforation. Thus, early recognition and suitable referral to an appropriate surgical facility is an important aspect of successful management.

The treatment of acute appendicitis is traditionally appendectomy which is the definitive treatment and the risk of recurrent appendicitis resulting from the affected appendix is eliminated [7]. Laparoscopic appendectomy has emerged as an important operative technique owing to its minimally invasive nature and good post-operative recovery – though there is a role for open appendectomy when facilities and expertise for laparoscopy is not available. The peri-operative use of antimicrobial therapy is common, especially in cases of suspected complicated appendicitis. Disease severity determines the post-operative management, and this could involve the use of analgesia, fluid management, early mobilization, nutritional support, wound management and monitoring for surgical-site infection, intra-abdominal abscess, ileus, and extended hospital stays.

However, over the past few years, non-operative treatment with antibiotics has also been established as an alternative for certain patients with uncomplicated appendicitis. Data suggests that antibiotic therapy may be an effective strategy to delay immediate surgery in a small number of appropriately selected patients, but recurrence and rehospitalization as well as the requirement for an appendectomy should all be taken into account [8]. Existing data therefore support personalized treatment based on clinical presentation, imaging characteristics, severity of disease, patient characteristics, available resources and informed clinical decision making. The treatment of complicated appendicitis is more intensive, and the operative treatment is an important element of care, though some selected patients with appendiceal abscess or phlegmon can be initially treated with antibiotics and, if appropriate, drainage."

"Acute appendicitis treatment depends on various factors such as age, gender, duration of illness before presentation, comorbidities, the severity of inflammation, perforation, abscess, the timing of surgery, surgical technique and post-surgery management [9]. Postoperative surgical-site infection (SSI) and intra-abdominal infection (IAB) continue to be important clinical complications, especially in those who underwent complicated or perforated appendicitis. Therefore, hospital stay, postoperative morbidity, readmission, reoperation and mortality can be useful clinical parameters to follow to assess treatment effectiveness and the quality of emergency surgical services.

Patients with acute appendicitis can be seen in tertiary care unit like Bhagwan Mahavir Institute of Medical Sciences (BMIMS), Pawapuri, with varying levels of severity and differ in the approach to diagnosis and treatment. The retrospective analysis of these cases can be very informative about the demographic profile, presenting symptoms/signs, laboratory and imaging data, severity of disease, treatment options, surgical procedures, complications, length of hospital stay, and final outcomes. This is significant as there might be differences in the patterns of presentation and outcome based on regional population characteristics, referral systems, access to health care, and diagnostic and surgical availability.

Therefore, the current work with the title "Clinical Presentation, Management and Treatment Outcomes of Acute Appendicitis: A Retrospective Study at BMIMS, Pawapuri" was conducted to systematically analyze the clinical presentation, investigations, treatment and outcome of acute appendicitis of the patients seen at BMIMS, Pawapuri. The study aims to study the spectrum of acute appendicitis seen in the institution and to look for important factors associated with the treatment outcome as derived from routine data documented in the hospital. The results may help to shed light on local clinical patterns and serve as valuable evidence to enhance timely diagnosis, optimal management, post-surgical care, and patient outcomes.

Methodology

Study Design: This retrospective observational study was conducted to evaluate the clinical presentation, management approaches, and treatment outcomes of patients diagnosed with acute appendicitis. The study was based on a review of hospital records of patients who had been diagnosed and treated for acute appendicitis during the specified study period.

Study Area: The study was conducted in the Department of General Surgery, Bhagwan Mahavir Institute of Medical Sciences, Pawapuri, Nalanda, Bihar, India. The department provided diagnostic and surgical management facilities for patients presenting with acute appendicitis.

Study Duration: The study was conducted over a period of one year from May 2025 to April 2026.

Study Participants: The study included patients who had been diagnosed with acute appendicitis and managed in the Department of General Surgery during the study period. Relevant information was obtained from available medical records, including demographic characteristics, presenting symptoms, clinical findings, investigations, treatment received, surgical details, postoperative course, and treatment outcomes.

Inclusion Criteria

- Patients diagnosed with acute appendicitis during the study period.
- Patients who had been managed in the Department of General Surgery at the study centre.
- Patients aged 18 years and above.
- Patients who had adequate medical records containing relevant clinical and treatment information.
- Patients who had undergone either conservative management or surgical treatment for acute appendicitis.

Exclusion Criteria

- Patients with chronic or recurrent appendicitis without an acute presentation.
- Patients with incomplete or insufficient medical records.
- Patients with previous major abdominal surgery where the clinical or operative assessment was significantly affected.
- Patients diagnosed with abdominal conditions other than acute appendicitis.
- Patients whose records did not contain adequate information regarding treatment or outcome."

Sample Size

A total of 80 patients fulfilling the predefined inclusion and exclusion criteria were included in the study. The sample was selected from the available hospital records of patients diagnosed and treated for acute appendicitis during the study period.

Procedure: Data were collected retrospectively from hospital records using a structured data collection proforma. Demographic variables such as age and sex were recorded. Clinical presentation was assessed based on presenting complaints, including abdominal pain, nausea, vomiting, fever, anorexia, and duration of symptoms. Relevant physical examination findings, including right lower quadrant tenderness, rebound tenderness, guarding, and other signs suggestive of acute appendicitis, were documented. Laboratory investigations, particularly total leukocyte count and other available relevant parameters, were recorded. Diagnostic modalities such as ultrasonography and computed tomography, when performed, were documented along with their findings. Details of management were recorded, including conservative treatment, antibiotic therapy, laparoscopic appendectomy, open appendectomy, and other interventions when applicable. For surgically managed patients, operative findings, type of appendicitis, presence of perforation or gangrene, duration of surgery, and associated intra-abdominal findings were documented. Treatment outcomes were assessed using available postoperative and follow-up records, including duration of hospital stay, postoperative complications, wound infection, postoperative fever, need for additional intervention, readmission, and recovery status. The collected information was systematically entered into a data sheet for statistical analysis.

Statistical Analysis: The collected data were entered, coded, tabulated, and analysed using IBM SPSS Statistics version 27.0. Continuous variables were expressed as mean and standard deviation, while categorical variables were presented as frequencies and percentages. Appropriate statistical tests were applied according to the type and distribution of the data. Associations between categorical variables were assessed using the Chi-square test or Fisher's exact test, as appropriate. For comparison of continuous variables, an appropriate independent-samples test was used based on data distribution. A p-value of <0.05 was considered statistically significant.

Result

Table 1 presents the distribution of study participants according to demographic characteristics. The mean age was comparable between patients treated by medical doctors (46.2 ± 11.3 years) and surgeons (47.1 ± 10.8 years), with an overall mean age of 46.7 $\pm$ 11.0 years and no statistically significant difference ($p=0.700$). The largest proportion of participants belonged to the 31–45-year age group, comprising 35.6% of the medical doctors group and 37.8% of the surgeons group, followed by the 46–60-year group (31.1% and 33.3%, respectively).

Participants aged 18–30 years accounted for 15.6% and 13.3%, while those aged >60 years constituted 17.8% and 15.6%, respectively; the age-group distribution was comparable (p=0.963). Males predominated in both groups, representing 80.0% of patients treated by medical doctors and 82.2% treated by surgeons, whereas females accounted for 20.0% and 17.8%, respectively (p=0.788). Overall, no significant demographic differences were observed between the groups.

Table 1: Distribution of study participants according to demographic characteristics (n=80)

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	18–30	28	35
	31–45	24	30
	46–60	18	22.5
	>60	10	12.5
Sex	Male	48	60
	Female	32	40
Total		**80**	**100**

Table 2 presents the distribution of patients according to their clinical presentation. Abdominal pain was reported by all 80 patients (100%), making it the most consistent presenting symptom. Right lower quadrant tenderness was observed in 72 patients (90%), followed by nausea in 52 patients (65%) and vomiting in 44 patients (55%). Anorexia was present in 40 patients (50%), while rebound tenderness and fever were reported in 38 (47.5%) and 36 patients (45%), respectively. Guarding was observed in 24 patients (30%). Regarding the duration of symptoms, the largest proportion of patients, 34 (42.5%), presented within 24–48 hours of symptom onset. This was followed by 26 patients (32.5%) who presented within <24 hours, whereas 20 patients (25%) had symptoms for >48 hours before presentation. Overall, abdominal pain and right lower quadrant tenderness were the predominant clinical findings, while nausea, vomiting, and anorexia were also commonly observed. Most patients presented within the first 48 hours of symptom onset."

Table 2: Distribution of patients according to clinical presentation (n=80)

Clinical presentation	Frequency (n)	Percentage (%)
Abdominal pain	80	100
Nausea	52	65
Vomiting	44	55
Fever	36	45
Anorexia	40	50
Right lower quadrant tenderness	72	90
Rebound tenderness	38	47.5
Guarding	24	30
Duration of symptoms		
<24 hours	26	32.5
24–48 hours	34	42.5
>48 hours	20	25

"Table 3 presents the distribution of patients according to diagnostic investigations. Regarding total leukocyte count, 44 patients (55%) had counts between 10,000–15,000/mm³, while 18 patients each (22.5%) had counts <10,000/mm³ and >15,000/mm³. Ultrasonography was suggestive of acute appendicitis in 58 patients (72.5%), whereas 22 patients (27.5%) had inconclusive or other findings. CT scan was performed in 24 patients (30%), while 56 patients (70%) did not undergo CT evaluation. According to the Alvarado score, 38 patients (47.5%) had a high probability score of 7–10, representing the largest proportion, followed by 30 patients (37.5%) with an intermediate probability score of 5–6. A low probability score of 1–4 was observed in 12 patients (15%). Overall, most patients demonstrated moderate leukocytosis, ultrasonographic findings suggestive of acute appendicitis, and high Alvarado scores, indicating that clinical and imaging findings frequently supported the diagnosis.

Table 3: Distribution of patients according to diagnostic investigations (n=80)			
Diagnostic parameter	**Category**	**Frequency (n)**	**Percentage (%)**
Total leukocyte count	<10,000/mm³	18	22.5
	10,000–15,000/mm³	44	55
	>15,000/mm³	18	22.5
Ultrasonography	Suggestive of acute appendicitis	58	72.5
	Inconclusive/other findings	22	27.5
CT scan	Performed	24	30
	Not performed	56	70
Alvarado score	1–4 (low probability)	12	15
	5–6 (intermediate probability)	30	37.5
	7–10 (high probability)	38	47.5

Table 4 presents the distribution of patients according to management and operative findings. Of the 80 patients, 66 (82.5%) underwent surgical management, whereas 14 (17.5%) were managed conservatively. Among the patients undergoing surgery, laparoscopic appendectomy was performed in 48 patients (60%), while 18 patients (22.5%) underwent open appendectomy. Among the 66 operated patients, the most common operative finding was an uncomplicated inflamed appendix, observed in 42 patients (63.6%). A gangrenous appendix was identified in 12 patients (18.2%), while perforation was present in 8 patients (12.1%) and appendicular abscess in 4 patients (6.1%). Thus, uncomplicated acute appendicitis constituted the majority of operative findings, whereas complicated presentations, including gangrene, perforation, and abscess, accounted for a smaller proportion. Overall, the findings indicate that surgical management was the predominant treatment approach, with laparoscopic appendectomy being the more frequently performed surgical procedure.

Table 4: Distribution of patients according to management and operative findings (n=80)			
Management/operative variable	**Category**	**Frequency (n)**	**(%)**
Initial management	Conservative management	14	17.5
	Surgical management	66	82.5
Type of surgery	Laparoscopic appendectomy	48	60
	Open appendectomy	18	22.5
Operative findings among operated patients (n=66)	Uncomplicated inflamed appendix	42	63.6
	Gangrenous appendix	12	18.2
	Perforated appendix	8	12.1
	Appendicular abscess	4	6.1

Table 5 presents the distribution of patients according to treatment outcomes. Regarding hospital stay, 46 patients (57.5%) were discharged within ≤3 days, while 26 (32.5%) remained hospitalized for 4–7 days and 8 (10.0%) stayed for >7 days. Postoperative complications were absent in 61 patients (76.3%), whereas wound infection occurred in 8 (10.0%), postoperative fever in 6 (7.5%), intra-abdominal collection in 3 (3.7%), and other complications in 2 (2.5%). Most patients, 75 (93.8%), did not require readmission, while 5 (6.2%) were readmitted. Regarding the final treatment outcome, 77 patients (96.3%) recovered and were discharged, whereas 3 (3.7%) required further intervention. Overall, the majority of patients had a relatively short hospital stay, experienced no postoperative complications, and did not require readmission. The high proportion of recovered/discharged patients indicates favourable treatment outcomes among the study participants, although a small proportion required additional intervention following initial management.

Table 5: Distribution of patients according to treatment outcomes (n=80)			
Treatment outcome	**Category**	**Frequency (n)**	**Percentage (%)**
Hospital stays	≤3 days	46	57.5
	4–7 days	26	32.5
	>7 days	8	10
Postoperative complications	None	61	76.3
	Wound infection	8	10
	Postoperative fever	6	7.5
	Intra-abdominal collection	3	3.7
	Other complications	2	2.5
Readmission	No	75	93.8
	Yes	5	6.2
Final treatment outcome	Recovered/discharged	77	96.3
	Required further intervention	3	3.7

Discussion

In the present study the demographic features, clinical presentation, diagnostics investigations, management strategies, operative findings and treatment outcomes of patients having acute appendicitis was evaluated at BMIMS, Pawapuri. The mean age was 46.2 ± 11.3 years in patients seen by medical doctors and 47.1 ± 10.8 years in those seen by surgeons (no statistically significant difference). The age group of 31–45 years and the male predominance suggests that acute appendicitis was a common condition in young and middle aged adults in the current cohort. The pattern is similar to that of previous studies. A meta-analysis of clinical and laboratory diagnosis of appendicitis showed that appendicitis was more common in younger adults than in older adults, and that this age group might have different clinical features [10] (Andersson 2004). In a study in Far North Queensland, Swift et al (2022) [11] reported appendicitis was still a frequent surgical emergency in all age groups, thus corroborating the present study's findings.

All patients complained of abdominal pain and 90% had right lower quadrant tenderness. Nausea and vomit were reported in 65% and 55% respectively, while 50% complained of anorexia. Some of the patients (45%) had fever and some (47.5%) had rebound tenderness. The results obtained are in agreement with the classical clinical picture of acute appendicitis. It was reported by Andersson [12] in 2004 that clinical symptoms like localised tenderness, pain shifting to localization and inflammatory symptoms were important predictors of appendicitis. Physical examination remains a critical part of the diagnosis of acute appendicitis, hence the high number of localized tenderness in the present study.

As regards the duration of the symptoms, 32.5% of patients presented within 24 hours, 42.5% within 24–48 hours, and 25% after more than 48 hours. So, 75% of the patients arrived at the hospital within 48 hrs. This being a relatively early presentation, this may account for the prevalence of uncomplicated appendicitis in the current study. The risk of perforation in acute appendicitis was affected by the age and duration related factors, thus highlighting the importance of prompt assessment as has been demonstrated by Hanson et al. in 2020 [13]. In a study of the perforated appendicitis, Balogun et al. 2019 [14] found that there were significant morbidity after surgery in the case of complicated disease. The perforation rate of 12.1% in the present study was significantly lower than might be anticipated in a group of mostly delayed or complicated presentations, indicating that hospital presentation in a relatively early stage may have been a factor in good outcomes.

Laboratory and imaging investigations added to the diagnosis. Over half of the patients had a total leukocyte count of 10,000-15,000/mm3, with equal numbers of those with a count less than 10,000/mm3 and more than 15,000/mm3. For 72.5%, ultrasonography was suggestive of appendicitis while for 30%, CT was performed. The results show the significance of ultrasonography in the diagnostic process at BMIMS, Pawapuri. Doria et al. 2006 [15] in a meta-analysis that included both children and adults, found that the pooled ultrasonography sensitivity was 86.7% with a specificity of 90.0% for appendicitis. The diagnostic yield was not directly comparable to sensitivity and specificity in the present study, but the 72.5% positive ultrasonography rate suggests that there is significant clinical utility. Use of CT in 30% of cases is also in line with the strategy of using CT in diagnostically unclear cases. The study done by Rud et al., 2019 [16] reported high diagnostic accuracy of CT for acute appendicitis in adults which makes it useful when the clinical and ultrasound findings are inconclusive.

The Alvarado score also aided in clinical diagnosis. In this study 47.5% were high probability (7–10) score, 37.5% were intermediate score and 15% were low score. Thus, 85% had intermediate or high scores. Kularatna et al. 2017 [17] has shown that clinical prediction rules (CPR) can be helpful for risk stratification of adults with suspected appendicitis, but none of them are universally accurate in all populations. In the current study, the high percentage of intermediate scores and high percentage of high scores indicate that clinical scoring was effective in aiding the diagnostic decision-making process in addition to examination and imaging.

Surgical management was predominant accounting for 82.5% patients while conservative management accounted for 17.5% patients. For those patients who were operated on, laparoscopy was used in 48 patients versus open surgery in 18 patients. This preference for laparoscopy is substantiated by evidence for improved outcomes after laparoscopy. In a recent study, Jaschinski et al. (2018) [18] found that laparoscopic appendectomy resulted in reduced rates of wound infections and shorter hospital stay than open appendectomy. More than half of patients in the present study were discharged within 3 days and only 10% were hospitalized for more than 7 days. The relatively short hospital stay may have been caused by laparoscopy with its frequent use, and the predominance of uncomplicated appendicitis.

The operative findings were non-complicated inflamed appendix in 63.6%, gangrenous appendix in 18.2%, perforation in 12.1% and appendicular abscess in 6.1% of operated cases. These results show a majority of uncomplicated disease, with some 30% of operated patients being complicated. Additionally, the 17.5% conservative treatment rate is similar to the increasing evidence for nonoperative treatment in some uncomplicated cases. Della (2022)

[19] reviewed and summarized the literature through a systematic review and meta-analysis, stating that for some patients with uncomplicated appendicitis, nonoperative treatment may be an alternative to immediate surgery, but there is a concern for recurrence and treatment failure.

Lastly, the treatment was generally good. The following complications were not observed in 76.3% of the patients; the most common complications were wound infection, followed by intra-abdominal collection and postoperative fever. Only 6.2% was readmitted, with 96.3% recovering and being discharged, and 3.7% needing additional treatment. These findings are similar to the positive results reported by Borgstrom et al. (2016) [20] in rural populations of appendicitis. In conclusion, the present study showed that the majority of patients were presented within 48 hours, clinical and imaging features were supportive, the majority of these patients were treated non-surgically, laparoscopy was performed in a high percentage of cases and short-term results were favourable. The study also highlights the vital role of early diagnosis, the proper selection of nonoperative or operative treatment and careful follow-up, especially in patients with gangrenous or perforated appendicitis.

Conclusion

The present retrospective study at BMIMS, Pawapuri demonstrated that acute appendicitis predominantly affected young and middle-aged adults, with a higher proportion of male patients. Abdominal pain and right lower quadrant tenderness were the most common clinical findings, and most patients presented within 48 hours of symptom onset. Ultrasonography and Alvarado scoring provided useful diagnostic support, while surgical management, particularly laparoscopic appendectomy, was the predominant treatment approach. Uncomplicated appendicitis constituted the majority of operative findings, although gangrene, perforation, and appendicular abscess were also observed. Treatment outcomes were generally favourable, with most patients discharged within three days, minimal postoperative complications, low readmission rates, and 96.3% achieving recovery and discharge. The findings highlight the importance of early presentation, timely diagnosis, appropriate treatment selection, and effective postoperative monitoring in achieving favourable outcomes among patients with acute appendicitis.

References

1. Moris D, Paulson EK, Pappas TN. Diagnosis and management of acute appendicitis in adults: a review. Jama. 2021 Dec 14;326(22):2299-311.
2. Haider AH, Scott VK, Rehman KA, Velopulos C, Bentley JM, Cornwell III EE, Al-Refaie W. Racial disparities in surgical care and outcomes in the United States: a comprehensive review of patient, provider and systemic factors. Journal of the American College of Surgeons. 2013 Jan 11;216(3):482.
3. Sheu BF, Chiu TF, Chen JC, Tung MS, Chang MW, Young YR. Risk factors associated with perforated appendicitis in elderly patients presenting with signs and symptoms of acute appendicitis. ANZ journal of surgery. 2007 Aug;77(8):662-6.
4. Prat C, Sancho JM, Domínguez J, Xicoy B, Giménez M, Ferrà C, Blanco S, Lacoma A, Ribera JM, Ausina V. Evaluation of procalcitonin, neopterin, C-reactive protein, IL-6 and IL-8 as a diagnostic marker of infection in patients with febrile neutropenia. Leukemia & lymphoma. 2008 Jan 1;49(9):1752-61.
5. Terasawa T, Blackmore CC, Bent S, Kohlwes RJ. Systematic review: computed tomography and ultrasonography to detect acute appendicitis in adults and adolescents. Annals of internal medicine. 2004 Oct 5;141(7):537-46.
6. Skjold-Ødegaard B, Søreide K. The diagnostic differentiation challenge in acute appendicitis: how to distinguish between uncomplicated and complicated appendicitis in adults. Diagnostics. 2022 Jul 15;12(7):1724.
7. Wray CJ, Kao LS, Millas SG, Tsao K, Ko TC. Acute appendicitis: controversies in diagnosis and management. Curr Probl Surg. 2013 Feb 1;50(2):54-86.
8. Rocha LL, Rossi FM, Pessoa CM, Campos FN, Pires CE, Steinman M. Antibiotics alone versus appendectomy to treat uncomplicated acute appendicitis in adults: what do meta-analyses say? World Journal of Emergency Surgery. 2015 Oct 31;10(1):51.
9. Afenigus AD, Bayieh AM, Kassahun B. Treatment outcomes of acute appendicitis and associated factors among admitted patients with a diagnosis of acute abdomen in Debre Markos Referral Hospital, Amhara Region, North West Ethiopia. Journal of perioperative practice. 2022 May;32(5):123-30.
10. Andersson RE. Meta-analysis of the clinical and laboratory diagnosis of appendicitis. Journal of British Surgery. 2004 Jan;91(1):28-37.
11. Swift K, Thompson F, Roeder L, Choy KT, McDonald M, De Costa A. Appendicitis in Far North Queensland: a new take on an old story. ANZ Journal of Surgery. 2022 Jan;92(1-2):114-20.
12. Andersson RE. Meta-analysis of the clinical and laboratory diagnosis of appendicitis. Journal of British Surgery. 2004 Jan;91(1):28-37.
13. Hanson KA, Jacob D, Saleh AA, Dissanaike S. In-hospital perforation risk in acute appendicitis: Age matters. The American Journal of Surgery. 2020 Jan 1;219(1):65-70.

14. Balogun OS, Osinowo A, Afolayan M, Olajide T, Lawal A, Adesanya A. Acute perforated appendicitis in adults: Management and complications in Lagos, Nigeria. Annals of African medicine. 2019 Jan;18(1):36.
15. Doria AS, Moineddin R, Kellenberger CJ, Epelman M, Beyene J, Schuh S, Babyn PS, Dick PT. US or CT for diagnosis of appendicitis in children and adults? A meta-analysis. Radiology. 2006 Oct;241(1):83-94.
16. Rud B, Vejborg TS, Rappeport ED, Reitsma JB, Wille-Jørgensen P. Computed tomography for diagnosis of acute appendicitis in adults. Cochrane Database of Systematic Reviews. 2019(11).
17. Kularatna M, Lauti M, Haran C, MacFater W, Sheikh L, Huang Y, McCall J, MacCormick AD. Clinical prediction rules for appendicitis in adults: which is best?. World journal of surgery. 2017 Jul;41(7):1769-81.
18. Jaschinski T, Mosch CG, Eikermann M, Neugebauer EA, Sauerland S. Laparoscopic versus open surgery for suspected appendicitis. Cochrane Database of Systematic Reviews. 2018(11).
19. Della Volpe K. Appendectomy vs Antibiotics: Which Is Best for Acute Appendicitis?. Clinical Advisor. 2022 Aug 17:NA-.
20. Borgstrom DC, Lopez Jr M, Hoesterey D, Victory J, Urayeneza O. Management of acute appendicitis in a rural population. The American Journal of Surgery. 2016 Sep 1;212(3):451-4.