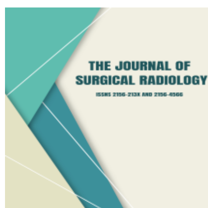

Journal of Surgical Radiology

Site: https://journalsurgrad.com/

ISSN Print 2156-213X| ISSN Online: 2156-4566 Volume: 05 Issue: 06 Open Access

Research Article

Spectrum of Clinical profile of acute abdomen at a Peripheral Tertiary care Hospital: An observational study

Dr. Junaid Nabi Wani[1], Dr. Nancy Bharti[2], Dr. Vinay Kumar Yadav[3], Dr. Ravinder Kumar[4], Dr. Ankush Banotra[5]

[1]Assistant Professor, Department of General Surgery, GMC Kathua, J & K India
[2]Senior Resident, Department of General Surgery, GMC Kathua, J & K India
[3]DNB Resident, Department of General Surgery, GMC Kathua, J & K India
[4]Professor and Head, Department of General Surgery, GMC Kathua, J & K India
[5]Assistant Professor, Department of General Surgery, GMC Kathua, J & K India

*Corresponding Author

Dr. Nancy Bharti,
Mail id: nancybhartimbbs44@gmail.com

Article History
Received: 21.04.2026
Revised: 04.05.2026
Accepted: 19.05.2026
Published: 05.06.2026

Citations:
Wani, J. N., Bharti, N., Yadav, V. K., Kumar, R., & Banotra, A. (Year). Spectrum of clinical profile of acute abdomen at a peripheral tertiary care hospital: An observational study. *J Surg Radiol,* V5(6) 1-8

Abstract: ***Introduction**:* **Aim:** To evaluate the spectrum of clinical profile, etiological distribution, management patterns, and outcomes among patients presenting with acute abdomen at a peripheral tertiary care hospital.**Materials and Methods**: This hospital-based observational study was conducted in the Department of General and Minimal Access Surgery, Government Medical College, Kathua, among 1400 patients presenting with acute abdomen. Detailed demographic data, clinical presentation, laboratory parameters, radiological findings, etiological diagnosis, management modalities, operative procedures, postoperative complications, duration of hospital stay, and mortality were recorded and analyzed. Statistical analysis was performed using SPSS software. Chi-square test and logistic regression analysis were used to determine significant associations, and p-value <0.05 was considered statistically significant.**Results:** The majority of patients belonged to the 31–50 years age group (41%), with male predominance (62%). Abdominal pain was the universal presenting complaint, followed by vomiting (68%) and abdominal distension (39%). Acute appendicitis was the most common etiology (30%), followed by intestinal obstruction (22%) and perforation peritonitis (18%). Surgical intervention was required in 70% of patients, with appendectomy being the most commonly performed procedure (37.1%). Wound infection was the most frequent postoperative complication (14%). The overall mortality rate was 3.9%. Delayed presentation (>48 hours), generalized peritonitis, leukocytosis, septicemia, mesenteric ischemia, ICU admission, and advanced age showed significant association with increased postoperative complications and mortality (p<0.001).**Conclusion**: Acute appendicitis remains the leading cause of acute abdomen in peripheral tertiary care settings. Delayed presentation significantly increases postoperative morbidity and mortality. Early diagnosis, timely surgical intervention, and improved emergency surgical services are essential for reducing adverse outcomes in patients presenting with acute abdomen.

Keywords: Acute abdomen; Appendicitis; Intestinal obstruction; Perforation peritonitis; Surgical emergencies; Peripheral tertiary care hospital

INTRODUCTION

Acute abdomen is one of the most common surgical emergencies encountered in clinical practice and refers to the sudden onset of severe abdominal pain requiring urgent evaluation and management. It represents a broad spectrum of surgical and medical conditions ranging from benign self-limiting disorders to life-threatening intra-abdominal catastrophes requiring immediate intervention. Acute abdominal pain accounts for nearly 5–10% of all emergency department visits worldwide and continues to constitute a major proportion of emergency surgical admissions.[1]

The diagnosis of acute abdomen remains a significant challenge because of the diversity of etiologies and overlap in clinical presentations. Common causes include acute appendicitis, intestinal obstruction, perforation peritonitis, acute cholecystitis, pancreatitis, mesenteric ischemia, renal or ureteric colic, and gynecological emergencies.[2] Clinical manifestations vary according to age, sex, comorbid conditions, socioeconomic status, and geographical distribution. Delay in diagnosis and management may result in serious complications such as sepsis, perforation, peritonitis, prolonged hospitalization, and increased mortality.

A meticulous clinical evaluation remains the cornerstone in the diagnosis of acute abdomen. Detailed history regarding onset, duration, location, character, migration, and progression of pain, along with associated symptoms such as vomiting, fever, constipation, abdominal distension, urinary complaints, and anorexia, provides valuable diagnostic clues.[1,3] Physical examination including tenderness, guarding, rigidity, rebound tenderness, abdominal distension, bowel sounds, and hemodynamic status further helps in identifying patients requiring urgent surgical intervention. Although laboratory investigations and imaging modalities such as ultrasonography (USG), plain radiography, and computed tomography (CT) have significantly improved diagnostic accuracy, clinical judgment remains

indispensable for early diagnosis and timely management.[3]

Several studies conducted in tertiary care centers have demonstrated that acute appendicitis is the most common cause of non-traumatic acute abdomen, followed by intestinal obstruction, perforation peritonitis, acute cholecystitis, and pancreatitis.[4,5] In developing countries, delayed presentation due to poor healthcare access, low socioeconomic status, and lack of awareness contributes substantially to morbidity and mortality associated with acute abdominal conditions. Peripheral tertiary care hospitals cater predominantly to rural and semi-urban populations and frequently serve as the first referral centers for surgical emergencies. Understanding the local etiological spectrum and clinical profile of acute abdomen in such settings is essential for early diagnosis, prompt intervention, and better resource allocation.

Despite the high burden of acute abdomen cases, limited literature is available regarding the spectrum of clinical presentation and management patterns in peripheral tertiary care institutions of North India, particularly in Jammu and Kashmir. Therefore, the present study titled "Spectrum of Clinical Profile of Acute Abdomen at a Peripheral Tertiary Care Hospital: An Observational Study" was conducted in the Department of General and Minimal Access Surgery, Government Medical College, Kathua, to evaluate the demographic characteristics, clinical presentation, etiological spectrum, investigations, and management outcomes among patients presenting with acute abdomen.

Materials and Methods

This hospital-based observational study was conducted in the Department of General and Minimal Access Surgery, Government Medical College, Kathua, over a period of 2 years. After obtaining approval from the Institutional Ethics Committee and written informed consent from the patients or their attendants, eligible patients were enrolled consecutively.

Sample size

$$n = \frac{Z^2_{\alpha/2}\, p(\%)q(\%)}{d(\%)^2}$$

where **p is the observed prevalence**

q = 100- p

d is the margin of error

$Z_{\alpha/2}$ is the ordinate of standard normal distribution at α% level of significance

Taking the prevalence of acute appendicitis among acute abdomen cases as 29% based on previous literature, with 95% confidence interval and 2.5% absolute precision, the minimum calculated sample size was 1265. Considering approximately 10% incomplete records and attrition, the final sample size was rounded to 1400 patients.

Recruitment criteria:

The study included all patients aged 18 years and above presenting with acute abdominal pain of less than 7 days duration and admitted with a diagnosis of acute abdomen under the Department of General and Minimal Access Surgery. Patients with abdominal trauma, pregnant women, patients with chronic abdominal pain without acute exacerbation, patients unwilling to participate, and those with incomplete clinical records were excluded from the study.

Data collection:

1. Detailed clinical history including age, sex, duration and site of pain, character of pain, associated symptoms such as vomiting, fever, constipation, abdominal distension, urinary complaints, and previous surgical history was recorded in a structured proforma.
2. General physical examination and detailed systemic examination were performed in all patients. Per abdominal examination included assessment for tenderness, guarding, rigidity, rebound tenderness, abdominal distension, palpable mass, bowel sounds, and signs of peritonitis. Vital parameters including pulse rate, blood pressure, respiratory rate, temperature, and oxygen saturation were documented at admission.
3. Relevant laboratory investigations including complete blood count (CBC), hemoglobin, renal function tests (RFT), liver function tests (LFT), serum electrolytes, blood sugar, serum amylase, serum lipase, and urine routine examination were performed in all patients as indicated clinically.
4. Radiological investigations included plain X-ray abdomen erect/supine view, chest X-ray, ultrasonography (USG) abdomen and pelvis, and contrast-enhanced computed tomography (CECT) abdomen in selected cases depending upon the provisional diagnosis and clinical condition of the patient.
5. Based on clinical examination and investigations, a provisional diagnosis was established. Patients were managed conservatively or surgically according to standard institutional protocols.
6. Operative findings were documented in patients undergoing surgery, while final diagnosis in conservatively managed patients was established on the basis of clinical improvement and radiological correlation.
7. Patients were followed throughout their hospital stay, and details regarding definitive diagnosis, type of management, operative procedures performed, postoperative complications, duration of hospital stay, and outcome were recorded and analyzed.

Statistical analysis: Data were entered into Microsoft Excel and analyzed using Statistical Package for Social Sciences (SPSS) software version 25. Categorical variables were expressed as frequencies and percentages, whereas continuous variables were expressed as mean ±

standard deviation (SD). Chi-square test or Fisher's exact test was used for comparison of categorical variables, and Student's t-test was applied for comparison of continuous variables wherever appropriate. A p-value of <0.05 was considered statistically significant. were strictly maintained throughout the study.

RESULTS

Most patients belonged to the 31–50 years age group (41%) with male predominance (62%). Delayed presentation beyond 48 hours was observed in 35.7% patients. Leukocytosis was present in 64.3% cases, while generalized peritonitis was observed in 35.7% patients (table 1).

Table 1: Baseline Demographic and Clinical Characteristics of Patients

Variable	Category	Number (%)
Age group	18–30 years	392 (28.0)
	31–50 years	574 (41.0)
	51–70 years	322 (23.0)
	>70 years	112 (8.0)
Gender	Male	868 (62.0)
	Female	532 (38.0)
Duration of symptoms	≤48 hours	900 (64.3)
	>48 hours	500 (35.7)
Leukocytosis	Present	900 (64.3)
	Absent	500 (35.7)
Generalized peritonitis	Present	500 (35.7)
	Absent	900 (64.3)
Hemodynamic instability	Present	182 (13.0)
	Absent	1218 (87.0)
Total		1400 (100.0)

Abdominal pain was the universal presenting symptom. Acute appendicitis was the most common etiology (30%), followed by intestinal obstruction (22%) and perforation peritonitis (18%) as shown in table 2.

Table 2: Presenting Symptoms and Etiological Spectrum of Acute Abdomen (n = 1400)

Variable	Number (%)
Presenting symptoms	
Abdominal pain	1400 (100)
Vomiting/nausea	952 (68.0)
Abdominal distension	546 (39.0)
Constipation/obstipation	434 (31.0)
Fever	406 (29.0)
Diarrhea	168 (12.0)
Etiological diagnosis	
Acute appendicitis	420 (30.0)
Intestinal obstruction	308 (22.0)
Perforation peritonitis	252 (18.0)
Acute cholecystitis	168 (12.0)
Acute pancreatitis	126 (9.0)
Renal/ureteric colic	56 (4.0)
Mesenteric ischemia	42 (3.0)
Others	28 (2.0)

Most patients (70%) required surgical intervention. Appendectomy was the most commonly performed surgical procedure (37.1%), followed by bowel resection and anastomosis (18.6%) as shown in table 3.

Table 3: Management Profile and Surgical Procedures (n = 1400)

Variable	Number (%)
Conservative management	420 (30.0)
Surgical management	980 (70.0)
Type of surgical procedures (n=980)	
Appendectomy	364 (37.1)
Resection and anastomosis	182 (18.6)
Perforation closure	168 (17.1)
Cholecystectomy	112 (11.4)
Adhesiolysis	70 (7.1)
Drainage procedures	42 (4.3)
Exploratory laparotomy	42 (4.3)
ICU admission	154 (11.0)
Re-exploration surgery	28 (2.0)

Wound infection was the most common postoperative complication (14%). Overall mortality in the study was 3.9%. Most patients (76%) had hospital stay ≤7 days (table 4).

Table 4: Postoperative Complications and Clinical Outcomes (n = 1400)

Variable	Number (%)
Postoperative Complications	
Wound infection	196 (14.0)
Respiratory infection	84 (6.0)
Septicemia	56 (4.0)
Anastomotic leak	28 (2.0)
No postoperative complications	616 (44.0)
Clinical Outcomes	
Hospital stay ≤7 days	1064 (76.0)
Hospital stay >7 days	336 (24.0)
Mortality	54 (3.9)

Leukocytosis, generalized peritonitis, younger age, and delayed presentation were significantly associated with need for surgical intervention (p<0.001) as shown in table 5.

Table 5: Factors Associated with Surgical Intervention (n = 1400)

Variable	Surgical Management n (%)	Conservative Management n (%)	Odds Ratio (95% CI)	p-value
Age ≤50 years	742 (76.8)	224 (23.2)	2.74 (2.12–3.53)	<0.001*
Age >50 years	238 (54.8)	196 (45.2)	Reference	
Leukocytosis present	742 (82.4)	158 (17.6)	5.18 (4.04–6.64)	<0.001*
Leukocytosis absent	238 (47.6)	262 (52.4)	Reference	
Peritonitis present	434 (86.8)	66 (13.2)	4.25 (3.14–5.76)	<0.001*
Peritonitis absent	546 (60.7)	354 (39.3)	Reference	
Delayed presentation >48 h	392 (78.4)	108 (21.6)	2.03 (1.56–2.64)	<0.001*
Presentation ≤48 h	588 (65.3)	312 (34.7)	Reference	

Delayed presentation, perforation peritonitis, advanced age, and leukocytosis were significant predictors of postoperative complications (p<0.001) as shown in table 6.

Table 6: Predictors of Postoperative Complications (n = 980)

Variable	Complications Present n (%)	Complications Absent n (%)	Odds Ratio (95% CI)	p-value
Age >50 years	196 (45.0)	240 (55.0)	2.12 (1.61–2.79)	<0.001*
Age ≤50 years	252 (46.3)	292 (53.7)	Reference	
Delayed presentation >48 h	280 (70.0)	120 (30.0)	5.84 (4.39–7.76)	<0.001*
Presentation ≤48 h	168 (28.9)	412 (71.1)	Reference	
Perforation peritonitis	168 (66.7)	84 (33.3)	4.11 (3.01–5.62)	<0.001*
Other diagnoses	280 (38.5)	448 (61.5)	Reference	
Leukocytosis present	350 (55.6)	280 (44.4)	3.76 (2.81–5.02)	<0.001*
Leukocytosis absent	98 (28.0)	252 (72.0)	Reference	

Multivariate logistic regression analysis demonstrated that septicemia, mesenteric ischemia, delayed presentation, generalized peritonitis, ICU admission, and advanced age were independent predictors of mortality (table 7).

Table 7: Multivariate Logistic Regression Analysis for Mortality (n = 1400)

Variable	Adjusted Odds Ratio (AOR)	95% Confidence Interval	p-value
Delayed presentation >48 h	4.82	2.36–9.84	<0.001*
Generalized peritonitis	3.94	1.98–7.82	<0.001*
Mesenteric ischemia	5.62	2.01–15.70	0.001*
Septicemia	6.85	3.14–14.93	<0.001*
ICU admission	3.26	1.52–6.97	0.002*
Age >70 years	2.18	1.01–4.72	0.046*

DISCUSSION

Acute abdomen remains one of the most frequently encountered surgical emergencies worldwide and continues to pose significant diagnostic and therapeutic challenges despite advances in imaging and perioperative care. Early identification of the underlying pathology and timely intervention are crucial for reducing morbidity and mortality. The present observational study conducted at the Department of General and Minimal Access Surgery, Government Medical College, Kathua, evaluated the clinical profile, etiological spectrum, management patterns, and outcomes among 1400 patients presenting with acute abdomen.

In the present study, the majority of patients belonged to the 31–50 years age group (41%), followed by the 18–30 years age group (28%). Similar findings were reported by Parab et al[1], who observed maximum incidence of acute abdomen among middle-aged adults. Singh et al[3] also documented that most patients presenting with acute abdomen were between 31 and 50 years of age. The increased incidence in this age group may be attributed to higher prevalence of inflammatory and obstructive gastrointestinal diseases. Elderly patients constituted a smaller proportion in the present study but demonstrated significantly higher morbidity and mortality. Bala et al[6] emphasized that advanced age is associated with delayed presentation, atypical symptoms, bowel ischemia, and poor physiological reserve, thereby contributing to adverse outcomes in acute abdominal emergencies.

A clear male predominance was observed in the present study, with males accounting for 62% of patients. Similar male predominance was reported by Singh et al[3] and Prasad et al[4] in their studies on acute abdomen. Bhatti et al[5] also documented a predominance of male patients in surgical emergency admissions. The higher prevalence among males may be related to occupational stress, dietary factors, smoking, alcohol consumption, and delayed healthcare-seeking behavior. However, Shinde et al[2] reported relatively comparable gender distribution in their study population. Such differences may reflect regional demographic variations and differences in disease patterns.

Abdominal pain was the universal presenting complaint in the present study, occurring in 100% of patients. Vomiting or nausea was observed in 68% of cases, followed by abdominal distension (39%), constipation or

obstipation (31%), and fever (29%). Similar symptom profiles were observed by Parab et al[1], who reported abdominal pain as the predominant presenting feature in all cases, with vomiting being the most common associated symptom. Shinde et al[2] similarly documented vomiting, abdominal distension, and fever among the common clinical presentations of acute abdomen. The predominance of these symptoms reflects the underlying inflammatory, obstructive, ischemic, or perforative intra-abdominal pathologies.

Leukocytosis was present in 64.3% of patients and showed significant association with requirement of surgical intervention and postoperative complications. Similar findings were observed by Prasad et al[4], who demonstrated that elevated leukocyte count significantly correlated with operative management in patients with acute abdomen. Hardy et al[7] also emphasized that leukocytosis remains an important inflammatory marker aiding diagnosis of surgical abdomen, especially when associated with peritoneal signs. Elevated total leukocyte count frequently reflects intra-abdominal infection, perforation, bowel ischemia, or systemic inflammatory response syndrome.

Generalized peritonitis was present in 35.7% of patients and was significantly associated with increased mortality and postoperative complications. Singh et al[3] reported similar observations where perforation peritonitis and diffuse peritoneal contamination were major determinants of poor surgical outcome. Sartelli et al[8] highlighted that generalized peritonitis is frequently associated with severe intra-abdominal sepsis, multiorgan dysfunction, and increased mortality if prompt source control is not achieved. Delayed diagnosis and inadequate resuscitation further worsen outcomes in such patients.

Acute appendicitis was identified as the most common etiology of acute abdomen in the present study, accounting for 30% of cases. Similar findings were documented by Bhatti et al[5], who reported appendicitis in approximately 29% of acute abdomen patients. Singh et al[1] and Parab et al[3] also identified acute appendicitis as the leading cause of non-traumatic acute abdomen. Di Saverio et al[9], in the WSES Jerusalem guidelines, emphasized that acute appendicitis remains the most common emergency surgical condition worldwide and highlighted the importance of early diagnosis and prompt surgical management.8 The predominance of appendicitis in the present study may be related to the younger age distribution and improved diagnostic awareness among clinicians.

Intestinal obstruction constituted the second most common etiology (22%) in the present study. Similar incidence rates were reported by Singh et al[3] and Bhatti et al[5]. Ten Broek et al[10], in the Bologna guidelines, emphasized that postoperative adhesions remain the most common cause of intestinal obstruction worldwide, followed by obstructed hernias, malignancy, and volvulus. Delayed presentation of bowel obstruction significantly increases the risk of bowel ischemia, gangrene, perforation, and septic shock. In rural populations, delayed referral and poor access to specialized surgical care often contribute to disease progression before hospital admission.

Perforation peritonitis accounted for 18% of cases in the present study and was strongly associated with postoperative complications and mortality. Similar findings were reported by Singh et al[3], who documented high mortality among patients with gastrointestinal perforation and diffuse peritonitis. Sartelli et al[8] further stated that perforation peritonitis continues to remain one of the major causes of surgical sepsis in developing countries. Common etiologies include peptic ulcer disease, enteric fever, tuberculosis, ischemic bowel disease, and delayed intestinal obstruction. Inadequate sanitation, malnutrition, and delayed healthcare access contribute substantially to disease severity in low-resource settings.

Acute cholecystitis accounted for 12% of cases, while acute pancreatitis represented 9% of the etiological spectrum. Yokoe et al[11], in the Tokyo Guidelines 2018, emphasized that early diagnosis and severity assessment are essential for optimal management of acute cholecystitis. Most patients with acute cholecystitis in the present study were managed conservatively initially, followed by elective or interval cholecystectomy where indicated. Banks et al[12], in the revised Atlanta classification, recommended conservative management with supportive therapy as the cornerstone of treatment in uncomplicated acute pancreatitis. Similar management strategies were adopted in the present study, with surgical intervention reserved for complicated cases.

Mesenteric ischemia represented only 3% of cases but demonstrated the highest mortality in the present study. Bala et al[6] emphasized that acute mesenteric ischemia remains one of the most lethal causes of acute abdomen because of delayed diagnosis and rapid progression to bowel necrosis. Nonspecific clinical presentation, late hospital presentation, and limited availability of advanced imaging modalities contribute significantly to mortality associated with mesenteric ischemia.

Most patients in the present study (70%) required surgical intervention, while 30% were managed conservatively. Comparable operative management rates were reported by Prasad et al[3] and Singh et al[4]. The high surgical burden reflects the predominance of appendicitis, intestinal obstruction, and perforation peritonitis among emergency admissions. Early operative intervention in selected cases remains essential to reduce complications and mortality.

Appendectomy was the most commonly performed procedure (37.1%), followed by bowel resection and anastomosis (18.6%) and perforation closure (17.1%). Similar operative patterns were described by Singh et al[3] in their observational study. Di Saverio et al[9] also reported appendectomy as the most frequently performed emergency abdominal surgery worldwide. Emergency laparotomy continues to remain a lifesaving procedure in patients with perforation, bowel gangrene, and generalized peritonitis.

Wound infection was the most common postoperative complication in the present study, occurring in 14% of patients. Respiratory infection, septicemia, and anastomotic leak were other important complications. Similar findings were reported by Singh et al[3], where surgical site infection constituted the majority of postoperative morbidity. Sartelli et al[8] highlighted that contaminated emergency abdominal surgeries carry a substantially higher risk of postoperative infection because of bacterial contamination and systemic inflammatory response. Strict aseptic precautions, timely antibiotic administration, and optimized perioperative care are therefore essential in reducing postoperative complications.

The overall mortality rate in the present study was 3.9%. Mortality was significantly associated with delayed presentation, generalized peritonitis, septicemia, ICU admission, mesenteric ischemia, and advanced age. Similar predictors of mortality have been consistently reported in previous studies. Bala et al[6] demonstrated that delayed diagnosis and bowel ischemia significantly increase mortality among acute abdomen patients. Hardy et al[7] also emphasized that delayed recognition of surgical abdomen contributes substantially to poor outcomes. In the present study, patients presenting after 48 hours had significantly higher postoperative complications, prolonged hospital stay, and mortality. Rural healthcare limitations, transportation difficulties, socioeconomic constraints, and delayed referral patterns may account for late presentation in peripheral tertiary care settings.

Multivariate logistic regression analysis identified septicemia as the strongest independent predictor of mortality, followed by mesenteric ischemia, delayed presentation, generalized peritonitis, ICU admission, and advanced age. Similar findings were described by Sartelli et al[8], who emphasized the importance of early sepsis recognition and prompt source control in reducing mortality associated with intra-abdominal infections. ICU admission often reflects severe systemic illness and multiorgan dysfunction requiring aggressive supportive care.

The present study highlights several important clinical implications. First, acute appendicitis continues to remain the leading cause of acute abdomen requiring emergency surgery. Second, delayed presentation remains a major contributor to adverse outcomes in rural populations. Third, simple clinical indicators such as leukocytosis, generalized peritonitis, and hemodynamic instability can help identify high-risk patients requiring urgent intervention. Finally, strengthening emergency surgical infrastructure, referral systems, imaging facilities, and critical care support at peripheral tertiary care hospitals may substantially improve patient outcomes.

The strengths of the present study include a large sample size and comprehensive evaluation of demographic, clinical, etiological, management, and outcome variables. However, the study also had certain limitations. Being a single-center observational study, the findings may not be universally generalizable. Long-term follow-up and quality-of-life assessment were not included. Nevertheless, the study provides valuable regional data regarding the spectrum and outcomes of acute abdomen in a peripheral tertiary care setting.

Conclusion

Acute abdomen remains one of the most common surgical emergencies encountered in peripheral tertiary care hospitals. Acute appendicitis was the most common etiology, followed by intestinal obstruction and perforation peritonitis. Male predominance and higher incidence among middle-aged adults were observed. Most patients required surgical intervention, with appendectomy being the most commonly performed procedure.

Delayed presentation, leukocytosis, generalized peritonitis, septicemia, mesenteric ischemia, and advanced age were significantly associated with postoperative complications and mortality. Early diagnosis, prompt resuscitation, timely surgical intervention, and improved perioperative care are essential for reducing morbidity and mortality associated with acute abdomen.

Strengthening emergency surgical services, improving referral systems, increasing public awareness regarding early healthcare seeking, and ensuring availability of diagnostic and critical care facilities at peripheral tertiary care centers can significantly improve outcomes in patients presenting with acute abdomen.

References

1. Parab S, Butala U, Prasad H, Ghetla S, Patel M. A prospective observational study of pattern and presentation of acute abdomen in a medical college hospital. Int J Med Sci Curr Res. 2022;5(2):604-620.
2. Shinde V, Dixit Y, Penmetsa P, Nair KR. Clinical and epidemiological profile of patients presenting with acute abdomen to the emergency department of a tertiary care hospital. Cureus. 2024;16(8):e67017.

3. Singh L, Jaiswal BK, Kumar V. A hospital-based observational study on non-traumatic acute abdomen in adults: aetiology, presentation, and clinical outcomes. Int J Pharm Qual Assur. 2025;16(3):251-257.
4. Prasad KT, Akhila K, Alekhya K, Prasad RVD. Spectrum of acute abdomen presentations and determinants of operative versus conservative management: a cross-sectional observational study. Int J Med Pharm Res. 2026;7(1):3167-3172.
5. Bhatti HZF, Rana FA, Khan MM, Ufaq F, Fayyaz MA, Aqeel CM, et al. Etiological spectrum of acute abdomen among patients presenting to surgical emergency in tertiary care hospital, Lahore. J Popul Ther Clin Pharmacol. 2025;32(3):153-159.
6. Bala M, Kashuk J, Moore EE, Kluger Y, Biffl W, Gomes CA, et al. Acute mesenteric ischemia: guidelines of the World Society of Emergency Surgery. World J Emerg Surg. 2017;12:38.
7. Hardy A, Butler B, Crandall M. Evaluation and management of acute abdominal pain in the emergency department. Int J Gen Med. 2013;6:789-797.
8. Sartelli M, Coccolini F, Kluger Y, Agastra E, Abu-Zidan FM, Abbas AES, et al. WSES/GAIS/SIS-E/WSIS/AAST global clinical pathways for patients with intra-abdominal infections. World J Emerg Surg. 2021;16:49.
9. Di Saverio S, Podda M, De Simone B, Ceresoli M, Augustin G, Gori A, et al. Diagnosis and treatment of acute appendicitis: 2020 update of the WSES Jerusalem guidelines. World J Emerg Surg. 2020;15:27.
10. Ten Broek RPG, Krielen P, Di Saverio S, Coccolini F, Biffl WL, Ansaloni L, et al. Bologna guidelines for diagnosis and management of adhesive small bowel obstruction. World J Emerg Surg. 2018;13:24.
11. Yokoe M, Hata J, Takada T, Strasberg SM, Asbun HJ, Wakabayashi G, et al. Tokyo Guidelines 2018: diagnostic criteria and severity grading of acute cholecystitis. J Hepatobiliary Pancreat Sci. 2018;25(1):41-54.
12. Banks PA, Bollen TL, Dervenis C, Gooszen HG, Johnson CD, Sarr MG, et al. Classification of acute pancreatitis—2012 revision of the Atlanta classification and definitions by international consensus. Gut. 2013;62(1):102-111.