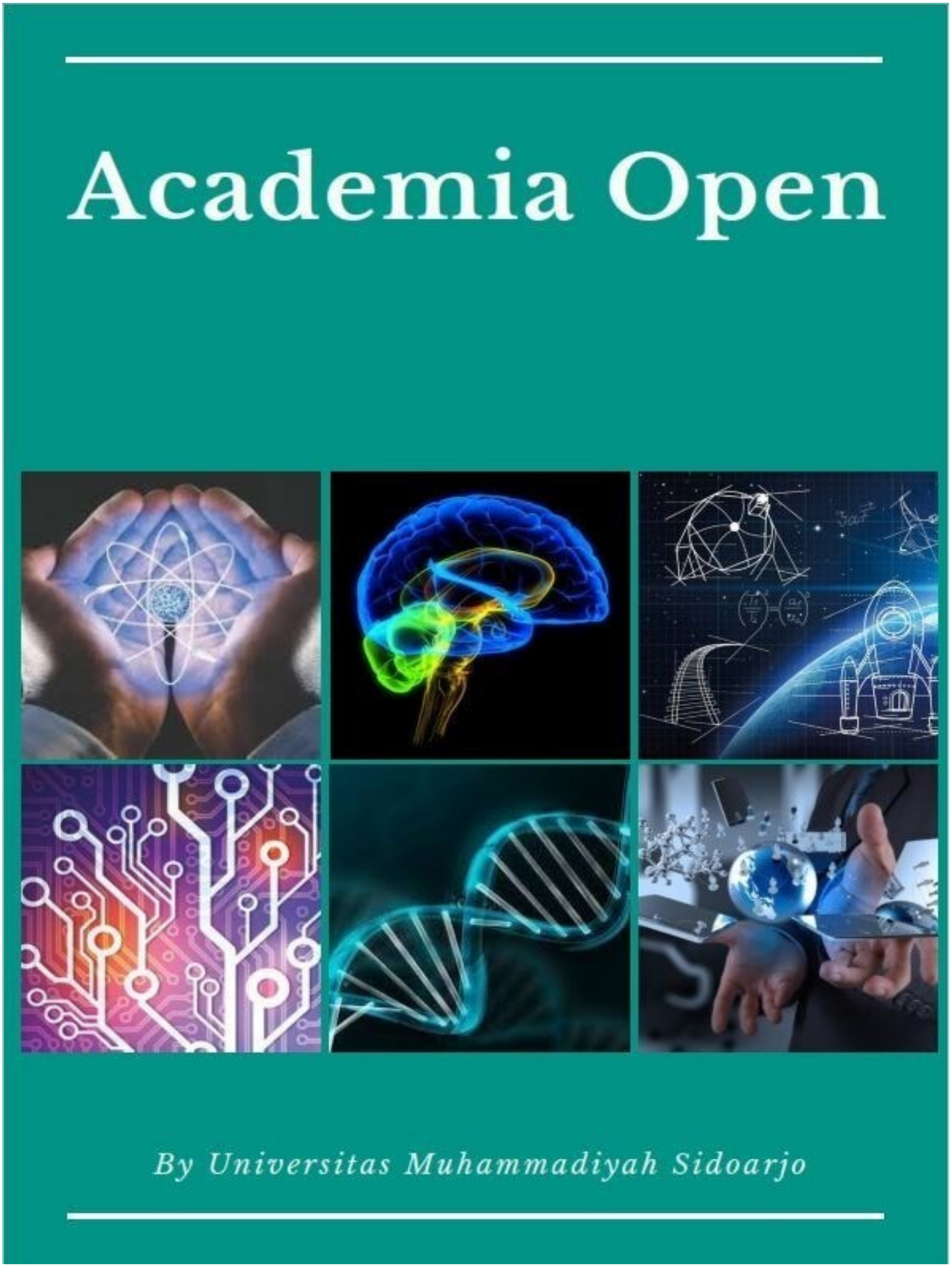
Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13120



ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13120

Table Of Contents

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13120

Originality Statement

The author[s] declare that this article is their own work and to the best of their knowledge it contains no materials previously published or written by another person, or substantial proportions of material which have been accepted for the published of any other published materials, except where due acknowledgement is made in the article. Any contribution made to the research by others, with whom author[s] have work, is explicitly acknowledged in the article.

Conflict of Interest Statement

The author[s] declare that this article was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright Statement

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13120

EDITORIAL TEAM

ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13120

Article information

Check this article update (crossmark)

Check this article impact (*)

Save this article to Mendeley

(*) Time for indexing process is various, depends on indexing database platform

ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13120

Features of The Disease Management in the Appendical Infiltrate

Ismailov F.M, farageroy@gmail.com,(1)
Tashkent State Medical University, Uzbekistan

Dolim K.S., farageroy@gmail.com,(2)
Tashkent State Medical University, Uzbekistan

Askarov T.A., farageroy@gmail.com,(3)
Tashkent State Medical University, Uzbekistan

(1) Corresponding author

Abstract

General Background: Acute appendicitis represents the most prevalent acute abdominal pathology requiring surgical intervention. **Specific Background:** Appendicular infiltrate, occurring in 1-10% of acute appendicitis cases, poses diagnostic challenges that frequently result in inappropriate treatment selection and unjustified surgical procedures. **Knowledge Gap:** Despite its clinical significance, standardized diagnostic criteria and management protocols for appendicular infiltrate remain inadequately defined, particularly regarding intraoperative recognition and intervention decisions. **Aims:** This study analyzed diagnostic approaches and treatment outcomes in patients presenting with appendicular infiltrate to establish evidence-based management protocols. **Results:** Among 3,567 patients treated for acute appendicitis between 2020-2024, appendicular infiltrate was identified in 38 cases (1.1%). Delayed presentation constituted the primary etiological factor (75%), while atypical appendiceal positioning complicated diagnosis in 7.9% of cases. Conservative management achieved successful resolution in 78.9% of patients, whereas 21.1% required surgical intervention due to abscess formation. Intraoperative identification of infiltrate in six patients necessitated procedure termination with drainage placement; one attempted appendectomy resulted in postoperative complications. **Novelty:** This investigation establishes that immediate cessation of surgery upon intraoperative infiltrate recognition minimizes complications. **Implications:** These findings emphasize prioritizing conservative management and avoiding appendectomy when infiltrate is encountered operatively.

Highlight :

- Late patient presentation is the primary factor in the development of appendicular infiltrate.
- Diagnostic difficulties, including atypical appendix location, often lead to tactical errors.
- Conservative management is effective in most cases, while unjustified appendectomy increases postoperative complications.

Keywords : Acute Appendicitis, Appendicular Infiltrate, Delayed Diagnosis, Conservative Treatment, Surgical Tactics

Published date: 2025-12-16

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13120

Introduction

In everyday surgical practice, significant difficulties are quite often encountered in the timely and accurate diagnosis of such a complication of acute appendicitis as an appendicular infiltrate. As a rule, the development of this pathological condition is associated with late presentation of patients for specialized medical care, which significantly complicates the clinical assessment of the disease at the prehospital stage and during the early period of hospitalization. In a number of cases, diagnostic errors lead to the selection of incorrect treatment tactics, as well as to the performance of unjustified and potentially traumatic surgical interventions [2,5,6,11,14].

Asimilar clinical situation was observed in 6 patients. In this group, an appendicular infiltrate was diagnosed only intraoperatively, which led to the decision to abandon continuation of radical surgical intervention. The operation was limited to its termination and completed by placement of a nipple drain for local administration of antibacterial agents and continuation of conservative therapy. In one clinical case, an attempt to perform an appendectomy was made, which was technically successful; however, in the postoperative period, purulent-inflammatory complications developed, including suppuration of the postoperative wound and formation of an intestinal fistula. Nevertheless, this complication had a favorable course and closed spontaneously within one month without the need for repeat surgical intervention [1,4,10,12].

All the above clinical observations clearly demonstrate the significance and relevance of the problem of timely diagnosis of appendicular infiltrate, as well as emphasize the need for a justified and differentiated approach to the selection of treatment tactics in complications of acute appendicitis. This, in turn, is of great importance for the prevention of postoperative complications, reduction in the frequency of unjustified surgical interventions, and improvement of long-term treatment outcomes [3,7,8,9,13,15].

Objective of the study: to analyze the diagnostic approaches and treatment tactics in patients with appendicular infiltrate.

Materials and Methods

From 2020 to 2024, a total of 3,567 patients with a diagnosis of acute appendicitis were treated in the surgical department. Among them, appendicular infiltrate was diagnosed in 38 patients, accounting for 1.1% of cases. All patients received conservative therapy; however, due to diagnostic errors, 6 of them underwent surgical intervention.

Results and Discussions

In surgery, there are longstanding problems that remain relevant over time, one of which is inflammation of the vermiform appendix and its complications. This is largely due to the high incidence of the disease, which occupies first place among all acute diseases of the abdominal organs. The treatment of complications of acute appendicitis continues to be one of the important problems of modern surgery. Appendicular infiltrate, as a complication of acute appendicitis, occurs relatively rarely. Its diagnosis may present certain difficulties and, as a consequence, lead to an incorrect choice of treatment strategy. According to the literature, its incidence ranges from 1% to 10%.

From 2020 to 2024, 3,567 patients with a diagnosis of acute appendicitis were admitted to our clinic. Among them, appendicular infiltrate was diagnosed in 38 patients, accounting for 1.1% of cases. The main cause of appendicular infiltrate formation was the prolonged course of the inflammatory process in the vermiform appendix and, accordingly, late presentation of patients to the surgical hospital (27 of 38 patients, or 75%). Delayed hospitalization was due to diagnostic errors made by physicians at the prehospital stage (15%). In some cases, the formation of the infiltrate was also facilitated by prolonged observation of patients in the surgical department with an incorrect diagnosis and diagnostic difficulties (10%).

During observation in the surgical department, it was not always possible to establish the correct diagnosis of appendicular infiltrate, and difficulties in recognizing this complication were sometimes encountered. The reasons for this included incomplete or incorrect collection of medical history, as well as outpatient treatment with analgesics, which in some cases led to a reduction of pain in the right iliac region and blurring of the clinical picture. Identification of appendicular infiltrate was often hindered by tension of the anterior abdominal wall muscles, which was present in the early stage of infiltrate formation and prevented palpation of the mass. Correct diagnosis was also complicated in some patients by excessive development of subcutaneous adipose tissue (6 patients).

Diagnosis of appendicular infiltrate was sometimes significantly complicated by atypical localization of the vermiform appendix, which was observed in 3 patients. Infiltrates located behind the cecum and in the subhepatic space were diagnosed very rarely and, in some cases, became the reason for unjustified surgical intervention. Such cases were observed in 2 patients who underwent surgery. In one patient, after intraoperative diagnosis of appendicular infiltrate, the operation was discontinued and completed with placement of a nipple drain in the ileocecal region for antibiotic administration. In another patient, an attempt at appendectomy was made, which we consider a serious error; although the procedure was technically successful, the postoperative period was complicated by wound suppuration and formation of an intestinal fistula. Subsequently, the fistula closed spontaneously in the late postoperative period.

Conservative therapy was prescribed to 30 patients with an established diagnosis of appendicular infiltrate. Treatment included bed rest, a sparing diet, application of cold to the right iliac region in the early stages of infiltrate formation, broad-spectrum antibiotics, and, with positive dynamics, physiotherapy procedures starting from days 5–6: suberythemal doses of ultraviolet irradiation to the right iliac region, followed by UHF therapy and local heat. This treatment strategy made it possible to achieve complete resolution of the infiltrate by days 12–15, after which patients were discharged in satisfactory condition with recommendations to return to the hospital after 2–3 months for elective surgical treatment without waiting for a recurrent pain episode.

In 8 of the 30 patients, conservative treatment was ineffective. Their condition gradually worsened during treatment and observation. On days 8–9, body temperature increased to high values, marked leukocytosis with a left shift of the leukocyte formula was noted. Palpation revealed enlargement of the palpable mass in the right iliac region with central softening and fluctuation, along with skin hyperemia in this area, i.e., all signs of abscess formation of the infiltrate appeared, which constituted an indication for emergency surgery (Table 1).

ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

Academia Open
Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.13120

Table 1. Clinical Course and Management of Appendicular Infiltrate

Parameter	Number of Patients	Percentage	Comments
Total patients with acute appendicitis	3567	100%	-
Patients with appendicular infiltrate	38	1.1%	-
Main cause of infiltrate – late presentation	27	75%	Prolonged inflammation of the vermiform appendix
Delayed hospitalization due to diagnostic errors	6	15%	Errors at the prehospital stage
Delay due to prolonged observation with incorrect diagnosis	4	10%	-
Atypical appendix location	3	7.9%	Diagnostic difficulties
Conservative treatment prescribed	30	78.9%	Included bed rest, diet, cold application, antibiotics, physiotherapy
Conservative treatment ineffective	8	21.1%	Development of abscess, indication for emergency surgery
Surgery after intraoperative recognition of infiltrate	2	5.3%	Placement of nipple drain / attempt at appendectomy
Postoperative complications (wound suppuration, intestinal fistula)	2	5.3%	Fistula closed spontaneously in late postoperative period
Mortality	0	0%	-

It should be noted that suppuration of the appendicular infiltrate, in our opinion, from a theoretical standpoint, is more likely to depend on the nature and degree of destruction in the focus-at the center of the infiltrate-i.e., on the morphological form of acute appendicitis. In our view, in most cases, infiltrates suppurate when the process of inflammatory limitation around the focus is delayed, allowing destructive changes of the appendix, such as gangrene or perforation of the inflamed organ, to develop. All patients with suppurated appendicular infiltrate underwent urgent surgical treatment. Intravenous anesthesia was used, and the abscess was opened via an extraperitoneal Dyakonov–Volkovich incision. The operation was completed with irrigation, sanitation, and drainage of the purulent cavity. In all patients, the surgical wound healed by secondary intention. In 2 patients, a fecal fistula developed on days 7–8 after surgery and subsequently closed spontaneously in the late postoperative period. No lethal outcomes were observed

Conclusion

1. The main cause of appendicular infiltrate as a complication of acute appendicitis is delayed patient presentation and late diagnosis.
2. When an appendicular infiltrate is recognized intraoperatively, it is advisable to discontinue the operation, completing it with placement of a nipple drain for local antibiotic administration.
3. Attempting an appendectomy upon detection of an appendicular infiltrate is considered a serious tactical error that can lead to severe postoperative complications.

References

1. U. Abdullakulov, A. Abdumajidov, and K. Zuparov, "Analysis of Hemostatic and Antimicrobial Properties of Hemoben and Ceftriaxone After Gallbladder Removal," SCIENCE, vol. 4, no. 1-4, pp. 112-115, 2025.
2. O. N. Ahmeddinov, "Is Appendectomy Necessary in Acute Catarrhal Appendicitis?" in Materials of the 3rd Congress of the Association of Surgeons Named After N. I. Pirogov, vol. 1, p. 158, 2001.
3. T. N. Baraev, "Regarding the Article," Khirurgiya (Surgery), vol. 9, pp. 62-63, 2000.

ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

4. K. S. Dolimov, "Appendectomy as a Cause of Acute Adhesive Intestinal Obstruction," BABU, vol. 1, pp. 33-34, 2018.
5. K. S. Dolimov, "Complications After Appendectomy," Uzbekiston Khirurgiyasi (Uzbekistan Surgery), vol. 4, pp. 20-22, 2012.
6. F. Ismailov and K. Zuparov, "Predicting the Severity of Peritoneal Complications in Patients with Perforation of Hollow Organs," SCIENCE, vol. 4, no. 1-4, pp. 129-132, 2025.
7. F. Ismailov and K. Zuparov, "Predicting the Severity of Peritoneal Complications in Patients with Perforation of Hollow Organs," SCIENCE, vol. 4, no. 1-4, pp. 129-132, 2025.
8. A. Kingler, F. Henle, H. Bittner, and M. Busch, "Laparoscopic Appendectomy Does Not Change the Incidence of Postoperative Infectious Complications," American Journal of Surgery, vol. 175, no. 3, pp. 232-235, 1998. DOI: 10.1016/S0002-9610(97)00271-0
9. V. L. Makarchuk, "Conservative Treatment of Appendicular Infiltrate," Khirurgiya (Surgery), vol. 12, pp. 10-12, 1990.
10. A. Yu. Moses, "Risk Factors for Wound Suppuration After Appendectomy," Khirurgiya (Surgery), vol. 9, pp. 119-122, 1990.
11. V. I. Rusakov, "Modern Concepts of Appendicitis Pathogenesis," Khirurgiya (Surgery), vol. 3, pp. 118-120, 2000.
12. A. A. Sh and K. F. Zuparov, "The Role of Oxidative Stress and Cytokine Imbalance in Destructive Cholecystitis," in Proc. International Congress on Biological, Physical and Chemical Studies (ITALY), vol. 8, pp. 71-73, February 2025.
13. A. A. Sh and K. F. Zuparov, "Immunological Changes in Destructive Cholecystitis," in Proc. International Congress on Biological, Physical and Chemical Studies (ITALY), vol. 8, pp. 68-70, January 2025.
14. G. D. Vilyavin, "Treatment of Generalized Appendicular Peritonitis," Khirurgiya (Surgery), vol. 5, pp. 12-14, 1991.
15. K. F. Zuparov and O. O. Alimxanov, "Amaliyotdan Keyingi Qorin Churrasi Bo'lgan Bemorlarda Hujayraviy va Gumoral Immunitet Holati" (Cellular and Humoral Immunity Status in Patients with Postoperative Abdominal Abscess), AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI (Scientific Journal of Applied and Medical Sciences), vol. 4, no. 3, pp. 183-187, 2025.

ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo