

A study of clinical presentation for acute appendicitis

Shengulwar Sayanna

Assistant Professor, Department of General Surgery, Indian Institute of Medical Science & Research College and Noor Hospital, Warudi, Taluka Badnapur, Dist. Jalna, Maharashtra, INDIA.

Email: sayannashengulwar@gmail.com

Abstract

Introduction: The term appendicitis was introduced by Reginald H. Filz, anatomopathologist at Harvard in 1886. Usually typical uncomplicated cases of acute appendicitis are easy to diagnose and treat. Usually the patients present with classical para-umbilical pain (visceral pain) migrating to the right lower quadrant of the abdomen (RLQ). Most commonly pain is associated with nausea, vomiting and low-grade fever. **Aims and Objectives:** To study the various clinical features of patients presenting with acute appendicitis. **Materials and Method:** The present cross sectional study was conducted in the department of surgery of Indian Institute of Medical Science & Research College and Noor Hospital, Warudi, Taluka Badnapur, Dist. Jalna. Total 30 cases of acute appendicitis were reporting to the institute were enrolled in the present study. Initially all the patients were briefly examined and were stabilized. Then detailed history regarding name, age, onset of complaints, duration and progress were noted. History of pain in abdomen, nausea, vomiting, fever etc was also enquired. A detail general examination and systemic examination was conducted and findings were recorded and analyzed. **Results:** It was observed that majority of the patients were between the age group of 21 to 40 years of age. Appendicitis was common in male (56.67%) as compared to female (43.33%). All patients (100%) complained of pain in abdomen and anorexia. Nausea was complaint by 86.67% where as vomiting was reported by 73.33% patients. On clinical examination it was observed that Tenderness and rebound tenderness in right iliac fossa was present in all the patients. Elevated body temperature was observed in 80% patients and majority of them were of Low grade fever. In laboratory evaluation, leukocytosis was diagnosed in 73.33% cases and shift to the left of neutrophils was seen in 53.33% cases. **Conclusion:** Appendicitis is common in younger age and present mostly with tenderness and rebound tenderness in right iliac fossa and nausea.

Keywords: acute appendicitis, clinical features, pain in abdomen.

*Address for Correspondence:

Dr. Shengulwar Sayanna, Assistant Professor, Department of General Surgery, Indian Institute of Medical Science & Research College and Noor Hospital, Warudi, Taluka Badnapur, Dist. Jalna, Maharashtra, INDIA.

Email: sayannashengulwar@gmail.com

Received Date: 01/03/2015 Revised Date: 10/03/2015 Accepted Date: 16/03/2015

Access this article online



Website:
www.statperson.com

DOI: 20 March 2015

INTRODUCTION

The term appendicitis was introduced by Reginald H. Filz, anatomopathologist at Harvard in 1886. Acute appendicitis is still the commonest abdominal surgical emergency with a lifetime incidence of 7%. In industrialized countries, individuals have a 7% lifetime risk of developing appendicitis.¹ Appendicitis is known to

be the disease of the younger age groups with only 5-10% of cases occurring in the elderly population. However, the incidence of the disease in this age group seems to be rising due to recent increase in the life expectancy.² In elderly patients due to underlying disease and sluggish bodily physiological reactions resulting in a higher rate of morbidity and mortality.³ Furthermore, the often atypical presentation and delay in seeking medical help have been associated with delay in diagnosis and treatment resulting in high morbidity and mortality rates.^{1,4} The prognosis of uncomplicated appendicitis in both young and old age groups is nearly equal. However, perforation worsens the condition dramatically. Usually typical uncomplicated cases of acute appendicitis are easy to diagnose and treat. Usually the patients present with classical para-umbilical pain (visceral pain) migrating to the right lower quadrant of the abdomen (RLQ). Most commonly pain is associated with nausea, vomiting and low-grade fever. On clinical examination tenderness and muscle guarding on

palpation in the in right iliac fossa over McBurney’s point and rebound tenderness elicited by deep palpation with quick release (Blumberg sign). But the classical signs are not present in all the patients of appendicitis.^{5,6,7} Variation in the position of the appendix, age of the patient and degree of inflammation make the clinical presentation of appendicitis inconsistent. In Females during childbearing age present diagnostic difficulty and the incidence of misdiagnosis is increased for women of the reproductive age.⁸ Thus the present study was undertaken to study the various clinical features of appendicitis.

AIMS AND OBJECTIVES

To study the various clinical features of patients presenting with acute appendicitis.

MATERIALS AND METHOD

The present cross sectional study was conducted in the department of surgery of Indian Institute of Medical

Science & Research College and Noor Hospital, Warudi, Taluka Badnapur, Dist. Jalna. Total 30 cases of acute appendicitis were reporting to the institute were enrolled in the present study. Initially all the patients were briefly examined and were stabilized. Then detailed history regarding name, age, inquired and recorded on a prestructured proforma. The onset of complaints, duration and progress were noted. History of pain in abdomen, nausea, vomiting, fever etc was also enquired. A detail general examination including build, nutrition, pallor, jaundice, edema, dehydration, pulse, B P, temperature, respiration, lymph nodes were examined and the relevant findings were recorded. A routine examination of cardiovascular, respiratory, Central nervous system was made and relevant findings were also noted. Detail per abdominal examination was done and the findings were recorded. The collected information was entered in the excel sheet and the data was analyzed.

RESULTS

Table 1: Age and sexwise distribution of patients

Variable	No. of patients	Percentage
Age	< 10	1 3.33
	11 to 20	3 10.00
	20 to 30	9 30.00
	30 to 40	7 26.67
	40 to 50	5 13.33
	50 to 60	4 13.33
	> 60	1 3.33
Sex	Male	17 56.67
	Female	13 43.33

It was observed that majority of the patients were between the age group of 21 to 40 years of age. Appendicitis was common in male (56.67%) as compared to female (43.33%).

Table 2: Distribution of patients according to Symptoms

Common Symptoms	No. of patients	Percentage
Abdominal pain	30	100.00
Anorexia	30	100.00
Nausea	26	86.67
Vomiting	22	73.33
Pain migration	14	46.67

In the present study all patient (100%) complaint of pain in abdomen and anorexia. Nausea was complaint by 86.67% where as vomiting was reported by 73.33% patients.

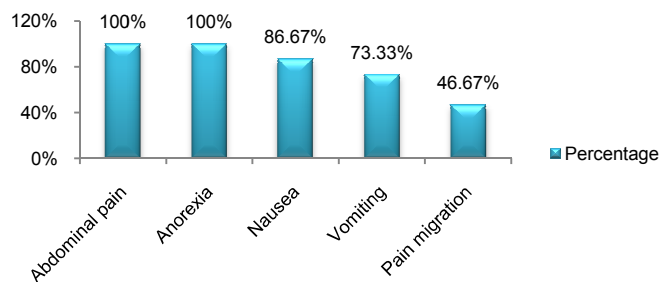
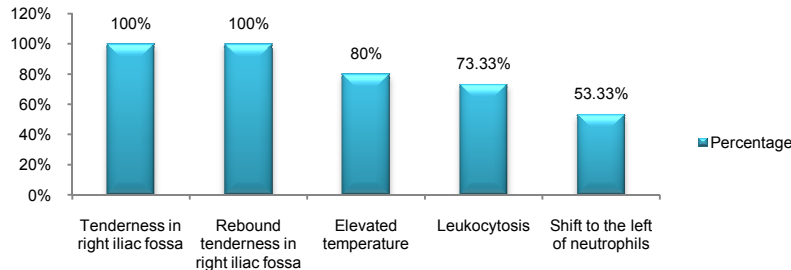


Figure 1: Distribution of patients according to Symptoms

Table 2: Distribution of patients according to Signs and lab findings

Signs and lab findings		No. of patients	Percentage
Signs	Tenderness in right iliac fossa	30	100.00
	Rebound tenderness in right iliac fossa	30	100.00
	Elevated temperature	24	80.00
lab findings	Leukocytosis	22	73.33
	Shift to the left of neutrophils	16	53.33

On clinical examination it was observed that Tenderness and rebound tenderness in right iliac fossa was present in all the patients. Elevated body temperature was observed in 80% patients and majority of them were of Low grade fever. In laboratory evaluation, leukocytosis was diagnosed in 73.33% cases and shift to the left of neutrophils was seen in 53.33% cases.

**Figure 2:** Distribution of patients according to Signs and lab findings

DISCUSSION

The present study was conducted with the objective to study the various clinical features of acute appendicitis. It was seen that appendicitis present with wide variation in the age. The peak age of incidence was 21 to 40 years of age. According to A Mohamed *et al*⁹ the highest incidence of acute appendicitis is during the second and third decade of life. Appendicitis is uncommon in young children because it is difficult to obtain the history and elicit clinical signs in young children, non-specific abdominal pain and mesenteric lymphadenitis are common in this age group and sometimes these are impossible to be differentiated from acute appendicitis on clinical grounds. These factors contribute to a perforation rate as high as 50% in this age group¹⁰. Acute appendicitis in the elderly is associated with significant morbidity.¹¹ There is usually delay in the diagnosis because abdominal laxity may hide the clinical signs. Progression to perforation is rapid with significant increase in morbidity and mortality. It was estimated that the perforation rate is about 50% in infancy, 10% between 10 and 40 years and 30% at 60 years of age.¹² In the present study it was observed that Appendicitis was common in male (56.67%) as compared to female (43.33%). The most common presenting symptom in the present study was pain in abdomen and anorexia, which was reported by all the cases. Nausea was complaint by 86.67% where as vomiting was reported by 73.33% patients. On physical examination of patients it was observed that Tenderness and rebound tenderness in right

iliac fossa was present in all the patients. Elevated body temperature was observed in 80% patients and majority of them were of Low grade fever. Various authors state that despite technologic advances, the diagnosis of appendicitis is still based primarily on the patient's history and the physical examination¹⁰. The accuracy of the clinical diagnosis of acute appendicitis has been estimated to be lying between 76% and 92%. And it depends upon the surgeon's experience¹³. Depending upon the signs and symptoms, various clinical scoring systems have been used to diagnose the appendicitis. The major benefit of the scoring system is for junior staff whose diagnostic accuracy increases from 58% to 71%¹⁴. Alvarado scoring system is the most famous scoring system used to help with the clinical diagnosis of acute appendicitis and is very easy to apply¹⁵. It was observed that appendicitis was associated with leukocytosis in 73.33% cases whereas shift to the left of neutrophils was seen in 53.33% cases. According to Elangovan S *et al*,¹⁶ the white blood cell (WBC) count is elevated (more than 10 x10⁹ per L) in 80 percent of all cases of acute appendicitis. But leucocytosis was diagnosed in majority of cases lower quadrant pain thus the elevated WBC has a low predictive value¹⁷. Serial WBC measurements (over 4 to 8 hours) in suspected cases may increase the specificity, as the WBC count often increases in acute appendicitis¹⁰. In addition, 95 percent of patients have neutrophilia.¹⁸

CONCLUSION

Thus in the end we conclude that appendicitis is common in younger age and present mostly with tenderness and rebound tenderness in right iliac fossa and nausea.

REFERENCES

1. Addiss DG, Shaffer N, Fowler BS, Tauxe RV: The epidemiology of appendicitis and appendectomy in the United States. *Am J Epidemiol*; 1990; 132: 910-925
2. Franz MG, Norman J, Fabri PJ: Increased morbidity of appendicitis with advancing age. *Am Surg* 1995, 61:40-44.
3. Douglas CD, MacPherson NE, Davidson DM, Gani JS: Randomized controlled trial of ultrasonography in diagnosis of acute appendicitis incorporating Alvarado's Score. *BMJ*; 2000; 321:919
4. Pesonen E, Ikonen J, Juhola M, Eskelinen M: Parameter for a knowledge base for acute appendicitis: *Methods Inf Med*; 1994; 33:220-226
5. Lewis FR, Holcroft JW, Boey J, Dumphy JE: Appendicitis: A critical review of diagnosis and treatment in 1000 cases. *Arch Surg*; 1975; 110:677-84
6. Berry J Jr, Malt RA: Appendicitis near its centenary. *Ann Surg*; 1984; 200:567-75
7. Khairy G: Acute appendicitis. Does removal of a normal appendix still exist and can we reduce its rate? *Saudi J Gastroenterol*; 2009; 15:167-70
8. Marcia LM, David Z, Darshani N, Melinda AM, Clifford Y: Negative appendectomy rate: Influence of CT scans. *Am Surg*; 2005; 71:803-8
9. A Mohamed, N Bhat. Acute Appendicitis Dilemma of Diagnosis and Management. *The Internet Journal of Surgery*. 2009 Volume 23 Number 2.
10. Hardin DM Jr: Acute appendicitis: review and update. *Am Fam Physician*; 1999; 60(7):2027-34.
11. Koepsell TD, Inui TS, Farewell VT: Factors affecting perforation in acute appendicitis. *Surg Gynecol Obstet*; 1981; 153:508-10
12. Lee JF, Leow CK, Lau WY: Appendicitis in the elderly. *Aust N Z J Surg*; 2000; 70:593-6.
13. Shakhathreh HS: The accuracy of C-reactive protein in the diagnosis of acute appendicitis compared with that of clinical diagnosis. *Med Arh*; 2000; 54:109-10
14. McAdam WA, Brock BM, Armitage T, Davenport P, Chan M, de Dombal FT: Twelve years' experience of computer-aided diagnosis in a district general hospital. *Ann R Coll Surg Engl*; 1990; 72:140-6.
15. Malik KA, Khan A, Waheed I: Evaluation of the Alvarado score in diagnosis of acute appendicitis. *J Coll Physicians Surg*; 2000; 10:392-4.
16. Elangovan S: Clinical and laboratory findings in acute appendicitis in the elderly. *J Am Board Fam Pract*; 1996; 9:75-8
17. Calder JD, Gajraj H: Recent advances in the diagnosis and treatment of acute appendicitis. *Br J Hosp Med* 1995; 54:129-33
18. Liu CD, McFadden DW: Acute abdomen and appendix. In: Greenfield LJ, eds. *Surgery: scientific principles and practice*. 2d ed. Philadelphia: Lippincott-Raven, 1997:1246-61.

Source of Support: None Declared
Conflict of Interest: None Declared