Original Article

Clinical Profile of Patients in Relation to Different Presentations of Acute Appendictis

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ABSTRACT

Objective: To study the different presentations of acute appendicitis and to find out its morbidity and mortality.
Study Design: Descriptive prospective study.
Place and Duration of Study: This study was conducted at Ghulam Mohammad Mahar Medical College and Hospital Sukkur during the period of two (02) years, from April2010 to March 2012.
Patients and Methods: This prospective study included 120 patients. Major criteria for diagnosis were symptoms and signs suggestive of acute appendicitis. Patients were operated within 12-24 hrs of admission. In majority of patients Lanz-incision were made. The appendix was submitted for histopathological examination in every case .Mostly patients were discharged on second post-operative day except the complicated cases which were discharged between 3-5 days.
Results: Out of 120 patients 80 were male and 40 were female with male to female ratio of 2:1, the highest incidence of disease is found in second and third decade of life. Common presenting symptom was anorexia seen in 85 patients. 62 patients were presented with periumblical pain which then shifted and localized at right iliac fossa. Common examination finding was rebound tenderness observed in 91 patients. 18 appendices were found perforated and 08 were gangrenous. The negative appendicitis was found in 16 patients. Commonest post-operative complication was wound infection seen in 22 patients.
Conclusion: Early presentation and surgical intervention can reduce the rate of morbidity, mortality and post-operative complications in patients of acute appendicitis.
Key Words: Acute appendicitis, anorexia, periumblical pain.

INTRODUCTION

Appendicitis is common with life time occurrence of seven (07) percent [1]. Riginald Fitz was the one who named appendicitis to be a disease which was previously diagnosed as an initial process of perityphlitis.[2] Highest incidence is in 10-19 years old.[3] Appendicitis is one of the most common causes of emergency abdominal surgery. It usually occurs when the appendix become blocked by faecolith, hypertrophied lymphoid tissue or rarely a tumor[4]. Despite technologic advances the diagnosis of appendicitis is still based primarily on patient history and physical examination[5]. The classic history of anorexia and periumblical pain followed by nausea, right lower quadrant pain and vomiting occur in only 50% of patients. Nausea is present in 61-92% of patients; anorexia is present in 74-78% of patients. Diarrhea or constipation is noted in 18% of patients. The pain migration is most discriminating feature of patient's history with sensitivity and specificity of approximately 80% [6]. The symptoms of appendicitis can vary. It can be hard to diagnose appendicitis in young children, elderly and women of child bearing age [7].In some cases other tests may be needed including abdominal ultrasound and ct-scan abdomen[8]. Diagnostic laparoscopy may be useful in selected cases (e.g. infants, elderly and female patients) to confirm the diagnosis of acute appendicitis. Complications of acute appendicitis may include wound infection, dehiscence, bowel obstruction, abdominal/pelvic abscess and rarely death[9]. The mortality rate in non-perforated appendicitis is less than 1%, but it may be as high as 5% or more in young and elderly patients in whom the diagnosis may often be delayed thus making perforation more likely [10]. The goal of therapy of acute appendicitis is early diagnosis and prompt operative intervention [11]. Many surgeons using an aggressive approach, accepting the certain number of negative appendicectomies traditionally 15% , although the use of imaging studies appear to have reduce the negative appendicectomy rate to less than 10% [12]. Perforation in acute appendicitis is responsible for increased morbidity (6-17%), mortality, prolonged hospital stay and financial burden in the patients [13].

PATIENTS AND METHODS

This prospective study was carried out on 120 patients during the period of two years from April 2010 to March 2012 in Ghulam Mohammad Mahar Medical College Hospital Sukkur. Patients with suspected diagnosis of acute appendicitis were hospitalized and relevant Proforma was filled. After detailed history thorough general physical and systemic examination was performed and positive findings recorded. After admission routine laboratory investigations were sent

along with the regular monitoring of vital signs of patients. Ultrasound abdomen was done in all patients. Metronidazole was given to all patients but in cases of perforated appendix third generation cephalosporin were added. Patients were kept nill orally, I/V fluids were given and appendicectomy done within 24 hrs of admission. In majority of patients we used Lanz incision but in those cases whose diagnosis was not clear we used lower midline incision. The special attention was given to technical and anatomical details of findings and dissecting the appendix with least trauma to adjacent structures. In few patients a cleavage plane could not be found and with careful sharp dissection appendix was separated from surrounding structures and removed. In few patients of perforated appendices drains were used. Appendix was submitted for histopathological examination in every case. Majority of the patients were discharged on 2nd post-operative day except complicated cases which were discharged on 3-5 post operative days. Patients were followed as out patients for removal of stitches and then up to the period of three months regularly.

RESULTS

Total patients were 120, out of them 80 were male and 40 were female with male to female ratio of 2:1. The highest incidence of disease is found in second and third decade of life, which decreases gradually as age advances above thirty years.

Table No. 1: Age incidence of appendicitis

Age Group	Male	Female
11-20 YRS	43	23
21-30 YRS	29	12
31-40 YRS	05	02
41-50 YRS	02	02
51-60 YRS	01	01
	Total:80	Total:40

All patients came with pain abdomen. In 62 (51.6%) patients pain started at umbilical region and then shifted and localized at right iliac fossa. The common presenting symptom was anorexia seen in 85 (70.8%) patients followed by nausea observed in 80 (66.6%) patients.

Table No. 2: Clinical presentation of various symptoms.

Symptoms	No: of patients	Percentage
Periumblical pain	62	51.6
Epigastric pain	25	20.8
Pain in RIF	30	25
Pain in hypochondrium	05	4.1
Nausea	80	66.6
Vomiting	68	56.6
Fever	60	50
Anorexia	85	70.8
Absolute constipation	15	18

While examining the different patients it was found that rebound tenderness was present in 91 (75.8%) patients followed by tachycardia which was present in 80 (66.6%) patients.

Table No. 3: Physical findings in the patients.

Signs	No: of patients	Percentage
Temperature	60	50
Tachycardia	80	66.6
Rebound tenderness	91	75.8
Guarding	75	62.5
Rigidity	23	19.1
Psoas sign	34	28.3
Obturator sign	17	14.1
Rovsing sign	48	40
Rectal tenderness	20	16.6

In 18(21.6%) patients appendix was found perforated and in 08(9.6%) patients it was gangrenous. The negative appendicitis was found in 16 (19.5%) patients, of which 04 (4.8%) patients were having Meckle's diverticulitis, 03 (3.6%) have Amoebic typhlitis, in 01 (0.83%) patient ectopic pregnancy was found and 02 (2.4%) were having salpingo-oophoritis, in 03(3.6%) patients we found mesenteric adenitis and in 03 (3.6%) patients appendix found macroscopically normal.

Out of 120 patients the 85 (70.8%) patients presented with the duration of symptoms of 12-24 hrs, in rest of 35 (29.1%) patients the duration of symptoms was 36-72 hours.

In 38 patients complications developed post-operatively, among them 22 (18.3%) patients developed wound infection.

Table No.4: Post-operative complications.

Complication	No: of patients	Percentage
Wound infection	22	18.3
Wound dehiscence	03	3.6
Wound haematoma	03	3.6
Faecal fistula	01	0.83
Intestinal obstruction	02	2.4
Pelvic abscess	03	3.6
Paralytic ileus	04	4.8

DISCUSSION

Acute appendicitis is one of the most common causes of acute abdominal pain. Present day treatment of choice for acute appendicitis is appendicectomy, however complications are inherent to operative treatment [14].Appendicitis occur most frequently in second and third decade of life. The incidence is highest in 10-19 yrs age; it is also higher in men (male to female ratio of 1.4:1). Clinical presentation of acute appendicitis may mimic other abdominal and chest inflammatory conditions and the classical symptoms of

migrating lower abdominal pain, fever, anorexia and vomiting may be evident in only 50-60% of patients [15].

In our study the highest incidence of disease is found in second and third decade of life, out of total 120 patients 80 were male and 40 were female with male to female ratio of 2:1.In one study the incidence was highest in male, age 20-29 yrs where as in female the highest incidence was observed in 10-19 yrs age group [16]. Another study gives the gender ratio of 1.2:1; the mean age was 25.7 yrs and majority of the cases occurring in third decade of life. Abdominal pain, fever, anorexia and vomiting were common symptoms. Commonly elicited signs include RIF tenderness, rebound tenderness, and localized guarding and right rectal wall tenderness [17]. In one study from Hong Kong the mean age of the patients having appendicitis is reported to be 33 yrs. In a retrospective review of 140 patients of appendicectomy, 52 female developed acute appendicitis with male to female ratio of 1.7:1 [13].

A Meta- analysis of the symptoms and signs associated with a presentation of acute appendicitis was unable to identify any one diagnostic finding but showed that migration of pain was associated with diagnosis of acute appendicitis. Tenderness on rectal examination may be present. Percussion tenderness, guarding and rebound tenderness are most reliable clinical findings indicating the diagnosis of acute appendicitis [18]. In our study the most common symptom was anorexia seen in 85(70.8%) patients, followed by nausea in 80(66.6%) patients, the migrating pain was present in 62 (51.6%) patients. The most frequent sign was rebound tenderness observed in 91(75.8%) patients followed by tachycardia in 80 (66.6%) patients. On study showed that presence of pyrexia with tachycardia is common, abdominal examination revealed localized tenderness and muscular rigidity [19]. Acute appendicitis continues to be a diagnostic challenge because of its variable presentation. The negative appendicectomy rate reported in surgical literature varies from 8-33% [20].

In our study the negative appendicectomy rate is 16%.

Appendicitis is most common cause of surgical abdomen in all ages, late diagnosis and surgical intervention is regarded as an important cause of morbidity in acute appendicitis [21].

In our study the appendix found perforated in 18 (21.6%) patients and it was gangrenous in 08(9.6%) patients, and majority of these patients presented with duration of symptoms of 36-72 hours. Careful attention to patient's history, a thorough physical examination and early clinical review help to minimize the possibility of delayed diagnosis of appendicitis. Appendicitis with a delay in treatment usually leads to high perforation rate and unfavorable outcome [22].One study concludes that delayed presentation to hospital is significant factor which leads to perforation in acute appendicitis [23].A retrospective study suggested that the risk of appendiceal rupture is minimal in patients with less than 24-36 hours of untreated symptoms [24]. Another retrospective study suggested that appendicectomy within 12-24 hours of presentation is not associated with an increase in hospital length of stay, operative time, advanced stages of appendicitis or complications [25]. The average rate of perforation at presentation is between 16-30%. Wound infection rate vary from less than 5% in simple to 20% in cases with perforation and gangrene [26].

In our study post operative complications occurred in 38 patients, among them wound infection was observed in 22(18.3%) patients. One study showed that the rate of post operative wound infection vary from 5-20% [27]. Another study showed that after appendicectomy the wound infection was seen in 80% patients, and the overall complication rate was 13.5% [17].

CONCLUSION

Early presentation and surgical intervention can reduce the rate of morbidity, mortality and post-operative complications in patients of acute appendicitis.

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