Original Article

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Clinical Profile of Acute Appendicitis: A Study at A Tertiary Care Center

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Abstract

Introduction: Patients who have appendicitis commonly report anorexia; appendicitis is unlikely in those with a normal appetite. Anorexia nearly always accompanies appendicitis. It is so constant that the diagnosis should be questioned if the patient is not anorectic. *Methodology:* 100 cases with provisional diagnosis of acute appendicitis which were posted for surgery were selected using randomization. Patients were methodically enquired according to the proforma. *Results:* Pain was the commonest symptom. The entire 100 patient suffered from right lower quadrant pain or periumbilical pain migrating to right lower quadrant. Migration of pain was present in 48 patients (48%) and the mean duration of pain was 24 hours. *Conclusion:* Pain occurred in right lower quadrant in all patients. Migration of pain (typical) was present only in half of the patients. The sequence of symptom appearance is of great diagnostic value. It will begin with pain, followed by nausea and/or vomiting and later fever of low grade

Keywords: Appendicitis; Pain; Clinical Profile.

Introduction

The classic presentation of acute appendicitis begins with crampy, intermittent abdominal pain, thought to be due to obstruction of appendiceal lumen. The pain may be either periumbilical or diffuse and difficult to localize. This is typically followed shortly thereafter with nausea; vomiting may or may not be present. Classically, pain migrates to the right lower quadrant as transmural inflammation of the appendix leads to inflammation of the peritoneal lining of the right lower abdomen. This usually occurs within 12-24 hours of the onset of symptoms. The character of the pain also changes form dull and colicky to sharp and constant. Movement or valsalva maneuver often worsens this pain, so that the patient typically desires to lie still [1].

Central abdominal pain is associated with anorexia, nausea and usually one or two episodes of vomiting that follow the onset of pain [2].

Patients who have appendicitis commonly report anorexia; appendicitis is unlikely in those with a normal appetite [1]. Anorexia nearly always accompanies appendicitis. It is so constant that the diagnosis should be questioned if the patient is not anorectic [3]. Anorexia is a useful and constant clinical feature, particularly in children [2].

Although vomiting occurs in nearly 75% of patients, it is neither prominent nor prolonged and most patient vomit only once or twice. Vomiting is caused both by neural stimulation and the presence of ileus [1,3,4].

Patients may report low grade fever upto 101°F (38.3°C). Higher temperatures and shaking chills should again alert the surgeon to other diagnosis, including appendiceal perforation or non-appendiceal sources [1,3,4].

Methodology

During the study period, 100 cases with provisional diagnosis of acute appendicitis which were posted for surgery were selected using randomization. A detailed history as to the method of presentation, thorough clinical examination and all patients were

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investigation with routine blood tests, WBC count, DC, USG abdomen and Pelvis, X-ray, blood grouping and Rh typing, and histopathological study of the appendix were performed and reported by senior pathologist of the department.

Inclusion Criteria

All the patients who were admitted to the K.R. Hospital during the study period with the diagnosis of acute appendicitis and posted for surgery were included in the study.

Diagnosis of acute appendicitis was made on the, history of right lower quadrant pain or periumbilical pain migrating to right lower quadrant, nausea, anorexia and / or vomiting, fever more than 38°C and or leukocytosis above 10,000 cells / cumm, right lower quadrant guarding and tenderness on physical examination.

Exclusion Criteria

1. Patients were excluded if the diagnosis of acute appendicitis was not clinically established.
2. Patient had history of symptoms more than 5 days.
3. Palpable mass in the right lower quadrant, suggesting an appendicitis abscess / mass.
4. Patients with generalized peritonitis due to appendicular perforation.
5. Acute appendicitis in pregnancy.
6. Acute appendicitis in less than 12 year old patients.
7. Inability to give informed consent due to mental disability.

Preoperative investigations were done which include WBC count and USG abdomen and pelvis. WBC count of more than 10,000 cells / mm^3 was considered positive and neutrophil cont of more than 75% was considered positive.

USG features of acute appendicitis are blind-ending tubular structure at the point of tenderness, non-compressible, diameter 7 mm or greater, no peristalsis, appendicoliths, high echogenicity non-compressible surrounding fat and edema of caecal pole considered positive.

Results

A total number of 100 cases of acute appendicitis, out of them 55 were male and 45 were female.

Table 1: Age distribution

Age (years)	Male	Female	Total	Percentage
12 to 20	20	12	32	32
21 to 30	20	18	38	38
31 to 40	07	08	15	15
41 to 50	05	05	10	10
51 to 60	02	02	04	04
76	01	-	01	01
Total	55	45	100	100

Children less than 12 years are not included in the study because we have a separate paediatric surgery department. The age of presentation of acute appendicitis varied from 12 years old to 65 years old.

Among the males the youngest patient was 12 years old and oldest was 65 years old, among the females the youngest patient was 12 years and oldest was 58 years old. In this study, this disease was common is third decade (21-30 years, 38%) and second decade (12-20 years, 32%).

Table 2: Clinical symptoms of acute appendicitis

Symptom	Number of cases	Percentage
Pain	100	100
Anorexia	91	91
Nausea	70	70
Vomiting	59	59
Fever	31	31
Diarrhoea	09	09
Constipation	01	01
Urinary symptoms	-	-

Pain was the commonest symptom. The entire 100 patient suffered from right lower quadrant pain or periumbilical pain migrating to right lower quadrant. Migration of pain was present in 48 patients (48%) and the mean duration of pain was 24 hours.

Table 3: Clinical signs of acute appendicitis

Sign	Number of cases	Percentage
Tenderness	100	100
Blumberg's sign (rebound tenderness)	61	61
Rigidity and guarding	49	49
Rovsing sign	46	46
Psoas test	33	33
Obturator test	04	04

Table 4: Tenderness site

Tenderness site	Number of cases	Percentage
McBurney's point	71	71
Right iliac fossa (RIF)	28	28
Right iliac fossa with right lumbar region (RIF with RLR)	01	01

All the patients had abdominal tenderness, 71 patients had tenderness in the McBurney point, 28 patients (28%) in right iliac fossa and 1 patient (1%) in right lumbar region with right iliac fossa. Rebound tenderness was present in 61 patients (61%).

Per-rectal examination was performed in all 100 patients, pelvic tenderness was detected in 11 patients (11%).

Discussion

In this study acute appendicitis was common in age group of 21-30 years (third decade) 38% followed by in age groups of 12-20 years (second decade) 32%. 70% of patients are less than 30 years of age. This is comparable with Addisset al [5].

Out of 100 cases, 55 (55%) were male and 45(45%) were female, the M:F ratio 1.22:1. The disease is slightly more common in males. This is comparable to M:F 1.2 to 1.3:1 of Addiss et al. and Korner H et al [5,6].

All 100 patients suffered from right lower quadrant pain or periumbilical pain, migrating to right lower quadrant. Migration of pain was present in 48 patients (48%).

The classic visceral to somatic sequence of pain is present in only about half of those patients subsequently proven to be acute appendicitis.[2]

Anorexia was present in 91 patients (91%), nausea in 70 patients (70%), vomiting in 59 patients (59%), fever in 31 patients (31%), diarrhoea in 9 patients (9%) and constipation in 1 patient (1%).

All the patients had abdominal tenderness. In this study, 71 patients had tenderness in the McBurney's point (71%), 28 patients (28%) in right iliac fossa and 1 patient (1%) in right lumbar region with right iliac fossa. Rebound tenderness (Blumberg's sign) was present in 61 patients (61%), rigidity and guarding in 49 patients (49%), rovsing sign in 46 patients (46%), psoas test in 33 patients (33%) and obturator test in 4 patients (4%).

Per rectal examination was performed in all 100 patients, right sided pelvic tenderness was detected in 11 patients (11%).

"Right lower quadrant tenderness is the most consistent of all signs of acute appendicitis, its presence should always raise the specter of appendicitis, even in the absence of other signs and symptoms" [7,8].

Conclusion

Acute appendicitis is commonest during the third decade (38%) followed by second decade (32%). Younger age is a risk factor, 70% of patients with acute appendicitis are les than 30 years of age.

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