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Case Report

Left Side Appendix with Appendicitis

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Abstract

Acute appendicitis is one of the common surgical emergencies in surgical practice. Appendicitis is basically a clinical entity and for all practical purposes appendicitis is diagnosed by good history taking, good clinical examination and needs only a few investigations to confirm. The management of an acute appendicitis is Appendicetomy under suitable anaesthesia. Whenever there are atypical clinical picture and the diagnosis is uncertain which may require special investigations including CT Scan as it was done in our case.

Keywords: Appendicitis; Left sided appendix; CT scan

Introduction

Appendicitis is a common surgical condition in clinical practice, this condition is seen by General Practitioners who are the first contact doctors and also some patients come to surgical specialist in hospitals. Many of the practitioners who offer non-operative management in the form of IV fluids, antibiotics and analgesics for 2 days to 3 days, often the patients will get better, and then surgery is usually postponed till the patient gets next attack. Usually the patients coming to surgical clinics are seen by General Surgeons and the patient undergoes appendicetomy after relevant investigations.

Case Presentation

A 26 years old man was admitted at KLE Centenary Charitable Hospital in the Surgical ward (Sept 2018) with the history of Acute pain abdomen since 3 months to 4 months the pain abdomen was insidious in onset and progressive in nature, it was periumbilical on both sides. The pain abdomen was associated with vomiting and fever. The patient was very positive that the pain was on both sides of the umbilicus and vomiting. He used to have recurrent episodes of pain for which he has taken treatment from general practitioners in the form of IV fluid and other IV medications for a day or two and he used to feel better. The patient had recurrent attacks of pain, vomiting and fever for which he came to our hospital. The patient did not have any medical co morbid conditions; he was not a smoker not an alcoholic. The pain abdomen was associated with vomiting and fever. The patient was very positive that pain was on both sides of the umbilicus and vomiting. On examination the patient was a young man moderately built and nourished with mild dehydration and not febrile with stable vital signs BP 120/80, Pulse rate 94/minute, RR 18/minute. Abdominal examination revealed scaphoid abdomen, moving well with respiration, umbilicus was central and inverted. There was no tenderness over the periumbilical regions, or in the iliac fossae. But deep seated tenderness was present in both the iliac fossae. There was no guarding or rigidity with normal bowel sounds. Other systems of CVS, RS, and CNS were normal. Clinically he was diagnosed to have Recurrent Appendicitis and was managed on the conservative lines with IV fluids, IV antibiotic (Taxim 1 gram IV BD, Metrogyl 500 mg IV BD with injection omez 40 mg IV OD along with analgesics of tramadol 50 mg SOS).

Investigation were done they are as follows shown in Table 1.

- USG abdomen and pelvic- 1/11/2018
- Minimal free fluid in the abdomen and pelvis
- Mild mesentric edema in the rif. Dilated appendix is not visualized
- CT scan abdomen and felvis- 05/11/2018
- Feature suggestive of mid gut malrotation with relations as described
- No evidence of volvulus or obstruction
- Mild enlarged seminal vesicles- likely, inflammatory
- Minimal fluid in felvis cavity
- Left sided appendix

The patient received conservative treatment for another 3 days and he was better both clinically and subjectively. He was advised to continue oral antibiotics for another 3 days and come back after

Table 1: Investigation was done they are as follows.

RBS- 4.30 WBC- 9900 PLT- 346000
D.C: N-70 L-25 E-3 M-2
RBS- 86
SODIUM-131
POTASSIUM- 3.30
CHLORIDE- 95
HIV- NON REATIVE HBsAG- NEGATIVE
URINE ROUTINE
URINE ALBUMIN- ABSENT
URINE GLUCOSE- ABSENT
URINE KETONE BODIES- ABSENT
PUS CELL-NIL
RBC- NIL

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1 week for follow-up. He promptly came back for follow up and he was clinically normal and he was advised to get a CT Scan as he was suffering from repeated attacks of pain abdomen, ultra sonography done on two earlier occasions did not show the evidence of appendix in the right iliac fossa.

He came back with CT scan to our surprise the report was left sided appendix with Mid-Gut mal rotation and the appendix was 5 mm to 6 mm in diameter and not inflamed. The patient was re-admitted after 2 weeks. He underwent appendicetomy under GA through lower mid-line incision. We confirmed the left sided appendix with Mid-Gut mal rotation. Appendicetomy was performed in the standard procedure, and a few bands which was adherent in the ileo caecal junction were lysed. Other visera were normal. The patient recovered well after surgery and was discharged in good condition after 6 days.

Discussion

Acute appendicitis is a common emergency in surgical conditions requiring operation. The diagnosis of acute appendicitis is mainly a clinical picture, having set of symptoms and signs, which requiring few laboratory investigations and some special radiological imaging studies [1]. Appendicitis is a common abdominal emergency and reported incidence about 40,000 hospital admissions annually in England [2]. Males are affected more than female with the ration 1.4:1 and life time risk is about 8.6% in males and 6.7% for females in the USA [3]. In acute appendicitis there are predominant symptoms such as periumbilical pain shifting to the right iliac fossa associated with vomiting and fever which is commonly called as MURPHY's TRIAD [4]. The classic murphy's triad can be influenced with age and an anatomical of the appendix as seen in our patient.

Common anatomical presentations of acute appendicitis are

- Retro caecal/Retro colic, about 75% as the most common entity. Clinical picture of pain in the right iliac fossa and or right loin with guarding with or rigidity. On palpation there is tenderness in the right iliac fossa point.
- Sub caecal/Pelvic about 20% it the second common clinical entity. Clinical picture of suprapubic pain associated with frequency of urine and or diarrhoea. On palpation there is mild tenderness in the right iliac fossa but rectal or vaginal tenderness is more prominent.
- Pre ileal/Post ileal is about 5%, symptoms and signs are not prominent but vomiting along with diarrhoea is obvious. Diarrhoea is more commonly seen in children and young patient.

Tenderness over the McBurney's point is a classical sign of acute appendicitis which is seen in majority of the patients [5]. In our case the patient was a young man of 26 years who presented with repeated attacks of pain abdomen associated with vomiting and fever. The patient used to go to his GP and take IV fluids, antibiotics and analgesics for a day or two and used to feel better and go home. The patient had the episode of pain with increasing intensity and not much relieved by the GP's treatment and came to the hospital. The patient gave a strong history of periumbilical pain on both sides of the umbilicus and discomfort over both the iliac fossae. On examination there was no definite area of tenderness on palpation. The patient was continued with conservative treatment of IV fluid, and antibiotics and analgesics for another 2 days to 3 days and the patient felt better. The patient was advised CT scan as the USG done twice did not confirm the position of the appendix or its pathology (Figure 1). Ultra sonography is an operator dependent investigation and has several limitations such as obese abdomen, large body hiatus and bowel gas which may not give accurate findings. Barium enema with gastrografin can detect other abnormities such as malrotation of the gut and the exact nature of ileo-caecal and its position, which is not commonly done now a day. Now a days with the availability of Contrast Enhanced Computed Tomography (CECT) which gives clear anatomical pathology. The value of CT Scan in the diagnosis of acute appendicitis is well documented with accuracy about 90% to 98% [6]. Left sided appendicitis is difficult diagnosis to establish due to its unusual presentation and it's often delayed. Majority of the left sided appendix are due to Mal-rotation of Midgut, Situs inversus totalis or an abnormally long appendix in various positions (Figure 2). Intestinal mal-rotation is a congenital rare anamoly and occurrence about 1 in 6000 live birth [7]. Intestinal mal-rotation commonly occurs in young children as now a day's more imagining studies like CT scan are available hence the diagnosis is more confirmed [8].

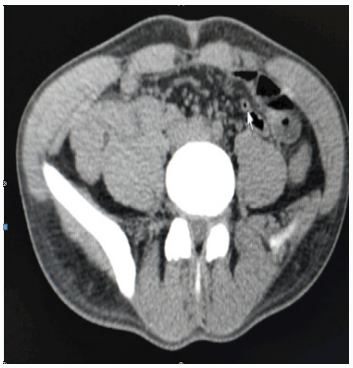

Figure 1: CT Scan showing appendix left side shown by arrow.

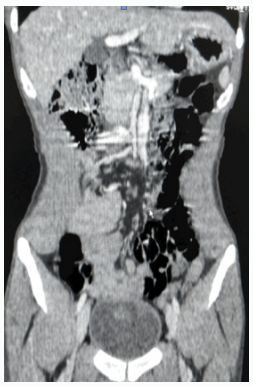

Figure 2: CT Scan showing Mid-gut Mal-Rotation of Jejunam and ileum.

In a large series of review of 95 published literatures dating from 1893 till July 2010 the details are as follows. Out of 95 cases the details were as follows, 59 patients presented with left quadrant pain, 14 patients presented with right quadrant pain, 7 patients had bilateral quadrant pain, 7 with left upper quadrant pain and 6 with periumbilical and two with pelvic pain [2]. The diagnosis were as follows 49 patients had pre-operative diagnosis, 19 patients had intera operative diagnosis, 5 patients had post-operative diagnosis and 14 patients had previously known having malrotation of the gut/ situs inversus totalis. No information available in 8 patients [9]. The

pathophysiology of left sided appendicitis is varied clinical picture such as bilateral or right sided pain-abdomen [10]. In case of situs inversus totalis the right sided pain is due to the nervous system structures are not correspondingly transposed [11]. The differential diagnosis of left lower abdomen pain are sigmoid diverticulitis, enteritis, Meckel's diverticulum, ovarian, cyst, pelvic inflammatory disease, testicular, torsion and mesenteric ischemia, etc., [12] (Table 2). In our case we had a patient with history of pain abdomen suggestive of Re-current appendicitis and the U.S.G done on two occasions did not show the evidence of appendix in the iliac fossa or inflammation, then it was decided to get CT scan. The role of CT Scan is very important in such cases as it gave a definite potion and the other pathology of the bowel which was mid-gut malrotation [13]. Once the diagnosis was made than the surgical procedure was a simple appendectomy. Appendicetomy can be performed through many incisions such as left McBurney's incision, lower midline incisions. Now a day with the availability of laparoscopic surgery, laparoscopic appendicetomy is preferred. Diagnostic laparoscopy which gives a detailed picture of the abdominal organs and appendectomy can do easily as it was done in many series [14] (Figure 3).

Table 2: Summary of 95 reported cases of left-sided acute appendicitis with situs inversus totalis and midgut malrotationn (%).

Patient Characteristics	Results
Mean age (yr, range)	29.1 ± 15.9 (8-82)
Sex	
Male	57 (60)
Female	38 (40)
Pain location	
Left-lower quadrant	59 (62.1)
Right-lower quadrant	14 (14.7)
Bilateral lower quadrant	7 (7.3)
Pelvic	2 (2)
Left-upper quadrant	7 (7.3)
Peri-umbailical	6 (6.3)
Congenital anomaly	
Situs inverses totalis	66 (69.4)
Midgut Marotation	23 (24.2)
Cecal malrotation	3 (3)
Unnoted	2 (2)
Other	1 (1)
Time of diagnosis	
Preoperative	49 (51.5)
Intraoperative	19 (20)
Known	14 (14.7)
Postop	5 (5.2)
Unnoted	8 (8.4)

Summary and Recommendations

Left sided appendicitis is an infrequent condition. Clinical condition of acute appendicitis is not clear in cases of left sided appendicitis. Classical picture of Murphy's triad of pain abdomen, vomiting and fever is usually not seen. Clinicians both general practitioners as well as surgical specialists get USG done but the diagnosis may not be confirmatory as many a times the evidence of the appendix is not visible or its pathology. Whenever the patients come to consult surgical specialist with recurrent episodes of pain abdomen suggestive you of appendicitis, in such cases it is always better to get C.E. CT scan for definite observation of the appendix along with other abdominal viscera. Once the diagnosis is conformed about the position of the appendix, appropriate incision is employed and appendectomy is done. Whenever laparoscopy facilities are available we recommend laparoscopic appendectomy. We strongly recommend CT Scan in all the cases of atypical appendicitis and diagnostic laparoscopy and proceed for appendictomy whenever the facilities are available.

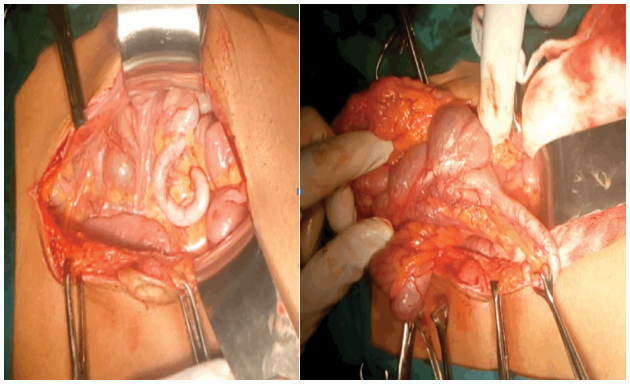

Figure 3: Intra op showing long curved appendix.

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