

Prospective Study of Differential Diagnosis and Management of Patients With Pain in Right Iliac Fossa – Study of 50 Cases

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ABSTRACT

AIMS:

- To evaluate various etiologies presenting as pain in right iliac fossa pain and their diagnosis using clinical examination and various radiological investigations.
- To evaluate various modes of management available to treat those conditions.

OBJECTIVES:

1. To study different etiologies which can present as pain in the right iliac fossa.
2. To study number of patients requiring different modalities of treatment including conservative or operative management
3. To study number of patients requiring planned or emergency surgical management.

CONCLUSION: In Study Of 50 Cases. Majority of the patients presenting with pain in RIF are from 3rd and 4th decade. Females (54%) were more affected than males (46%). Majority of patients presents (72%) within 5 days of onset of pain. 44% of patients had diagnosed as appendicitis based on clinical evaluation, and 30% of patients had confirmed by ultrasonography. 26 patients were managed conservatively, and 24 patients were managed operatively. The most common complication was wound infection which was more common in emergency operations followed by postoperative ileus.

Keywords: Acute Appendicitis, Right Illiac Fossa Pain

INTRODUCTION

Pain in right iliac fossa is one of the most common presentation of the patients reporting at the emergency department.^[1] Nearly 75% of the cases presenting with acute abdominal pain can be attributed to the right lower quadrant of the abdomen.^[2]

The differential diagnosis of the patients presenting with acute pain R.I.F is not always straight forward and a number of conditions may be responsible for pain at this site. In most of the cases, first diagnosis to be considered is acute appendicitis, which is undoubtedly the most common surgical

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emergency.^[3] Although appendectomy is the most common emergency general surgical procedure performed in any hospital, its diagnosis still remains difficult and a negative appendectomy rate of 15-30% rising up to 50% in women of reproductive age has been reported.^[4]

Several authors considered higher negative appendectomy rates acceptable in order to minimize the incidence of perforation. There is a long list of surgical and medical problems, including right ureteric colic, nonspecific mesenteric lymphadenitis, ruptured ectopic gestation, pelvic inflammatory disease, ruptured functional ovarian cysts, amoebiasis, viral gastroenteritis, acute cholecystitis, perforated duodenal ulcer, Crohn's colitis, right basal pneumonia etc. which can present as an acute pain in R.I.F and can create a diagnostic problem. So the familiarity with the conditions other than appendicitis presenting as acute pain in R.I.F as well as their management is very important. The purpose of the present study is to recognise certain well defined clinicopathological entities, presenting as pain in the right iliac fossa, the relative incidence of various pathologies, their management and outcome. Relevant literature has been reviewed.

RESULTS

Many surgical and gynaecological conditions like appendicitis, ureteric calculi, ileocolitis, pelvic inflammatory disease, ectopic pregnancies are more prevalent in younger age groups (Table 1).

Table 1: Age Distribution

Age	Patient (N)	Patient (%)
21-30	23	46
31-40	9	18
41-50	2	4
51-60	7	14
61-70	3	6
71-80	3	6
81-90	3	6
Grand Total	50	100

In present study females (n-27 54%) outnumbered the males (n-23 46%).

Pain in right iliac fossa was more common symptom in female than male due to prevalence of gynaecologic problems.

In present study 48.14% of females had gastrointestinal conditions, 37.04% had gynaecological conditions, 7.40% had urological conditions and 7.40% had other conditions like rectus sheath hematoma and psoas abscess.

In present study 78.26% of males presented with gastrointestinal conditions, 17.39% presented with urological conditions and 4.34% had other conditions like rectus sheath hematoma (Table 2).

Patients with appendicitis, ureteric calculi, torsion of ovary, ectopic pregnancy presented with pain within 5 days, whereas patients with pelvic inflammatory disease and ileocolitis presented with pain within 6-10 days and patients with ileocecal tuberculosis, caecal cancer presented with pain within 11-15 days (Table 2).

The most common associated complain with pain was nausea which was present in 90% of case followed by vomiting which was present in 64% of cases. Fever was present only in two cases i.e., 4% of cases. One case was of ileocecal tuberculosis with appendicitis and second case was of caecal perforation. Whitish discharge per vaginum was present in 2/3 cases of pelvic inflammatory disease. Abdominal distension was present in all the case of small bowel obstruction (Table 4).

USG has sensitivity of 67% and specificity of 88% in diagnosing bowel and mesenteric conditions. In present study all 50 patients got done sonography of abdomen. 30% of

Table 2: Number of Days of Pain

Pain (N = Days)	Patient (N)	Patient (%)
0 - 5	36	72
6 - 10	11	22
11 - 15	3	6
Grand total	50	100

Table 3: Associated Complaints With Pain

Sr. No.	Complaints	Patient (N)	Percentage (%)
1	Nausea	45	90
2	Vomiting	32	64
3	Abdominal Distention	3	6
4	Constipation	2	4
5	Diarrhoea	2	4
6	Burning Micturition	3	6
7	Painful Menstruation	3	6
8	Whitish discharge per Vagina	2	4
9	Bleeding per Vagina	1	2
10	Fever	2	4
11	None	5	10

Table 4: Diagnosis According To Ultrasonography Findings Of Abdomen

Sr. No.	Usg Findings	Patient (N)	Patient (%)
1	Appendicitis	15	30
2	Ileocolitis	4	8
3	Hemorrhagic cyst	1	2
4	Ectopic pregnancy	2	4
5	Ovarian torsion	1	2
6	Rectus hematoma	2	4
7	Psoas abscess	1	2
8	Mesenteric lymphadenitis	3	6
9	Intussusception	1	2
10	Small Bowel Obstruction	3	6
11	Bowel perforation	2	4
12	Ureteric calculi	5	10
13	Undescended testes	1	2
14	Ileocecal tuberculosis	1	2
15	Right Colon carcinoma	1	2
16	NAD	7	14
Grand Total		50	100

patients were diagnosed with appendicitis. 10% of patient had ureteric calculi, 8% had ileocolitis, 6% had mesenteric lymphadenitis, 6% had small bowel obstruction and in 14% of patients ultrasonography was normal.

In present study Out of 15 patients of appendicitis diagnosed on ultrasonography 2 patients underwent CECT abdomen to rule out other pathologies and were diagnosed with appendicitis with peri-appendicular abscess. Out of 50 patients 1 patient (2%) was diagnosed with intussusception on clinical evaluation out of which 1 patient (2 %) had changes of intussusception on ultrasonography which was confirmed by CECT abdomen. From these observation radiological investigations has more specificity in diagnosing various aetiologies presenting as pain in right iliac fossa than clinical evaluation.

Patients presenting with right iliac fossa pain were expected to have leucocytosis. In present study 30% of patients had wbc count more than 11,000 and 70% of patients had wbc within normal limits

In present study out of 50 patients 31 patients (62%) had gastrointestinal conditions, 10 female patients (20%) had gynaecological conditions, 6 patients (12%) had urological problems and other conditions were present in rest 3 patients (6%) which included rectus sheath hematoma (4%) and psoas abscess (2%). Out of 62% of gastrointestinal problems 30% had appendicitis in acute or chronic form, 8% had ileocolitis, 6% had small bowel obstruction, 6% has mesenteric lymphadenitis, 4% had peptic perforation, 2% had ileocecal tuberculosis, 2% had

Table 5: Specificity of Radiological Investigation in Diagnosing Various Etiologies Presenting as Pain in Right Iliac Fossa

Sr. No.	Condition	Diagnosis Based On Evaluation			
		Clinical		Radiological	
1	Appendicitis	22	44%	15	30%
2	Ileocolitis	6	12%	4	8%
3	Ureteric calculi	3	6%	5	10%
4	Small bowel obstruction	3	6%	3	6%
5	Peptic perforation	2	4%	2	4%
6	Ectopic pregnancy	2	4%	2	4%
7	Intussusception	1	2%	1	2%
8	Others	11	22%	17	34%
Grand Total		50	100	50	100

caecal perforation, 2% had right colon carcinoma and 2% had intussusception. Out of 12% of urological conditions, 10% had ureteric calculi and 2% had undescended testis and no cases of pyelonephritis were found. Out of 20% cases of gynaecological conditions 6% had Mittelschmerz syndrome, 6% had pelvic inflammatory disease, 4% had ectopic pregnancy, 2% had right sided haemorrhagic cyst and 2% had torsion of right ovary. Out of 50 patients 26 patients (52%) were managed conservatively and 24 patients (48%) were managed operatively. The operations conducted were for appendicitis, peptic perforation, caecal perforations, ectopic pregnancy, right side colon carcinoma, psoas abscess, ovarian torsion and undescended testis.

Out of 50 patients (30%) had appendicitis. All the 30% of patient were managed operatively either by laparoscopic method or open method acute or chronic appendicitis were differentiated by clinical examination and ultrasonography. Out of 15 cases, 10 cases (66.66%) had acute appendicitis and 5(33.33%) had chronic appendicitis. Out of 9 laparoscopic surgeries 7 surgeries (77.77%) were done electively and 2 surgeries (22.22%) were done in emergency. Out of 5 open surgeries 3 surgeries (60%) were done in emergency and 2 surgeries (40%) were done electively. And one patient was taken in emergency and was

started with laparoscopic approach but was eventually converted to open method due to peri-appendicular collection.

Out of 24 operated patients 9 patients (37.5%) had postoperative complications in terms of post operative ileus, wound infection and sepsis and 15 (62.5%) patients had no complications. In present study out of 24 operated case 9 developed complications. Out of 9 patients, 7 patients were operated in emergency and 2 patients were operated electively. Out of 9 patients, 5 patients (55.55%) developed wound infection, 3 patients (33.33%) developed postoperative ileus and one patient (11.11%) developed sepsis. Out of 5 patients developing wound infection, 3 patients (60%)

DISCUSSION

Present study was descriptive study conducted in tertiary care hospital at Ahmedabad on a patients admitted for pain in the right iliac fossa pain between December 2021 and November 2022. All the patients above 18 years of age were included.

Total 50 patients having complain of right iliac fossa pain were participated.

The relevant history and clinical findings of each case were noted. The final diagnosis was established based on histopathological examination of the operated specimen. For the cases managed conservatively, the clinical

diagnoses supported by radiological findings were considered final. Due to covid pandemic some of the patients were unable to come for follow up on time.

More than half patients having complain of right iliac fossa pain were present in age group of 21-30 years (46%) and 31-40 years (18%) followed by 51-60 years of age group. Least number of patients were fell in 61-90 years of age (total 9%) (Table-1) Many surgical and gynaecological conditions like appendicitis, ureteric calculi, ileocolitis, pelvic inflammatory disease, ectopic pregnancy are more prevalent in younger age groups. In study of Omar Farooq et al^[5], patients having complain of right iliac fossa pain was present in age group of 5-15 years (25.33%) and 15-25 years (41.33%), 25-35 (29.33%) years, 35-45 (2.6%) years followed by more than 45 (1.3%) years of age group. Overall, in study, more than half (54%) of patient having complain of right iliac fossa pain were female. Around (46%) patients were male (Table 2). Pain in right iliac fossa was more common symptom in female than male due to high prevalence of gynecological problems. In study of Shetty Sushruth et al^[6], a total of 250 patients with RIF pain were included, of which 135 (54%) were males and 115 (46%) were females. In study of Dr. Saurabh Kothari et al^[7], a total of 250 patients with RIF pain were included, of which 61% were males and 39% were females. In study of Y Abdeldaim et al^[8], a total of 117 patients with RIF pain were included, of which 38% were males and 62% were females.

CONCLUSION

In the present study of Prospective Study Of Differential Diagnosis and Management Of Patients With Pain In Right Iliac Fossa - Study Of 50 Cases, 50 patients of pain in right iliac fossa who fulfil the inclusion criteria were taken, evaluated and treated. The main purpose of the study was to evaluate the different etiologies presenting as pain in right iliac fossa, their timely diagnosis using clinical evaluation further confirmed by radiological investigations, various modes of management

and outcome of the treatment. Due to covid pandemic some of the patients were unable to come for follow up on time.

Majority of the patients presenting with pain in right iliac fossa are from 3rd and 4th decade. Many surgical and gynecological conditions like appendicitis, ureteric calculi, ileocolitis, pelvic inflammatory disease, ectopic pregnancy are more prevalent in younger age groups. Females (54%) were more affected than males (46%).

In present study majority of the cases were involving gastrointestinal system (62%) both in males and females, followed by urology system (12%) in males and gynecology system in females (20%).

Majority of the presents (72%) within 5 days of onset of pain due to acute conditions presenting as pain in right iliac fossa.

Nausea (90%) and vomiting (64%) were the most common associated complains of pain with which patients presented.

In present study, 44% of patients had diagnosed as appendicitis based on clinical evaluation, and 30 % of patients had confirmed by ultrasonography. So it concludes that USG helps in diagnosing acute appendicitis accurately and timely.

Leucocytes are raised only in 30% patients presenting as pain in right iliac Fossa. Out of 50 patients 26 patients (52%) were managed conservatively and 24 patients (48%) were managed operatively. Out of 24 operated patients, 12(50%) patients were operated electively and 12 (50%) patients had to be operated in emergency.

Out of total 15 appendicitis patients, majority of patients were managed by operation either by laparoscopic (60.00%) or open surgery (33.33%). Remaining patients (6.67%) were managed by converted from laparoscopic to open surgery. 9(60%) patients out of 15 patients of appendicitis were operated electively. 6(40%) patients had to be operated in emergency.

In present study, more than one third patients (37%) developed post-operative

complication out of total 24 operated patients. Majority of patients (63%) had no postoperative complication. The most common complication was wound infection which was more common in emergency operations followed by postoperative ileus which was more common in patients who were approached by exploratory laparotomy.

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