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RESEARCH ARTICLE
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"EVIDENCED BASED DIAGNOSTIC PROTOCOL AND MANAGEMENT FOR PAIN IN RIGHT ILIAC FOSSA"

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ABSTRACT

BACKGROUND; Right iliac fossa pain is most common clinical presentation encountered in surgical opd. Usually during evaluation, diagnosis is uncertain in some cases and patient suffers a lot. Clinical symptoms usually not involved during evaluation of patient this also makes diagnosis more difficult. Therefore aim of the study was that how we will proceed in this case

METHOD AND METHOD; this was prospective study and total 30 patients were analyzed. Study was done at tertiary centre. All patients suspected with pain in right iliac fossa included in this study. First evaluated clinically then biochemical and radiological investigated. Histological and acid fast bacilli culture was not included. Diagnostic laparoscopy was not included in this study

RESULTS; out of 30 cases, acute appendicitis were in 15 cases (50%), followed by appendicular lump(7 cases ,23%), irritable bowel disease (3 cases,10%),tubercular lesion (2 cases,6.7%),carcinoma of caecum (1 case,3.33%), appendicular abscess(1 case,3.33%) , both appendicitis with tubercular lesion were also present (1 case,3.33%). All cases of acute appendicitis, appendicular lump, carcinoma of caecum were managed surgically while appendicular abscess and ilieocaecal tuberculosis was managed conservatively.

CONCLUSION; pain in right iliac fossa is very common presentation of many diseases therefore diagnostic evaluation of right iliac fossa pain is very difficult. It varied widely with age and sex especially in female is very cautious during clinical evaluation. Even CT scan is still unclear about the diagnosis and till date no definite diagnostic protocol has made. This study suggest a protocol for management of pain in right ilac fossa but before validate this protocol, a large data must be needed.

KEYWORDS; Serum adenosine deaminase (S.A.D.A.), serum carcinogenic embryonic antigen (S.C.E.A.), Koch's abdomen, colonoscopy, appendicular lump, Mcburney's point

INTRODUCTION

Right iliac fossa pain is most common surgical emergency that encountered each and every day by surgeons [1]. Younger age group commonly involved. Over 50 years of age usually diagnostic dilemma is present because of higher chances of neoplastic etiology [2]. Clinical, biochemical and radiological parameter required to help diagnosis. In right iliac fossa common organ includes appendix, caecum, terminal ileum, lymph nodes, retroperitoneal tissues, anterior abdominal wall disease and other nearby organ like, ovaries, ureter, urinary bladder and testis pathology may extend into this region. In younger population most common pathology encounters in order of frequency, appendicitis, appendicular lump, appendicular abscess, mesenteric lymphadenitis, ileal thickening, ilieocaecal tuberculosis, right ovarian cyst , carcinoma of caecum, right ectopic kidney, right anterior wall abscess and ectopic pregnancy [3]. In Younger age group, symptoms usually present with pain, fever, vomiting, and migratory pain. After clinical evaluation, ultrasound is enough to differentiate the diagnosis but above 50 years of age along with weight loss, loss of appetite, altered bowel habbit, diagnosis could not easily differentiate. CT scan is mandatory in all patient age above 50 years because of high chances of lump or mass in right iliac fossa and avoids unnecessary surgery sometimes. Right iliac fossa pain is a challenging clinical presentation for every surgeon [4].objective of the study was to Keep in mind various differential diagnosis and clinical knowledge that supported by investigation required to find out definitive diagnosis [5]

METHOD.

Ethical approval: Not required This is a prospective study and all record is preserved in the department of general surgery in venkteshwara institute of medical sciences U.P, India. All patients with symptoms of right iliac fossa pain were admitted between June 2021 - June 2022

Inclusion criteria

In this study, Clinical symptoms and signs evaluated first then USG and basic hematological investigation done in all cases. After primary evaluation when diagnosis is suspicious then CT scan was investigated. In tubercular pathology, reversed neutrophil/ lymphocytes ratio, serum adenosine deaminase (S.ADA), Montoux test, erythrocytes sediment ratio (ESR), serum C.E.A. And colonoscopy was also investigated as a supportive diagnostic test.

Exclusion criteria; gynecological cases were not included and laparoscopy procedure was not involved in this study. Histological and acid fast bacilli culture was not included

Statistical analysis:

Data was entered into Microsoft excel data sheet and the statistical analysis was done using SPSS (Statistical Package for Social Sciences) Version 16.0. Categorical data was represented in the form of frequencies and proportions.

Results:

Total number of cases considered in this study is 30, admitted in the hospital and all record is well-maintained in the department of general surgery. In which 11 were female and 19 were male patients.

Table 1: Causes of right iliac fossa swellings.

Diagnosis	Number of cases	Percentage (%)
Acute appendicitis	15	50.00
Appendicular lump	7	23.33
Tubercular lesion	3	10.00
Carcinoma caecum	1	3.33
Chronic appendicitis	3	10.00
Appendicular abscess	1	3.33
Total	30	100.00

In this study, out of 30 patients, 15 patients (50%) diagnosed to have Acute appendicitis followed by Appendicular lump 7 (23.33%), Chronic appendicitis 3(10.00%), tubercular lesion 3(10.00%), Carcinoma caecum 1 (3.33%), Appendicular abscess 1 (3.33%). (Table 1)

Table 2: Age wise distribution of causes.

Age group (in years)	Acute appendicitis	Appendicular lump	Tubercular lesion	Carcinoma caecum	Chronic appendicitis	Appendicular abscess	Total	Percentage (%)
0-10	2	0	0	0	0	0	2	6.67
11-20	1	1	1	0	1	1	5	16.67
21-30	7	5	2	0	0	0	14	46.67
31-40	3	1	0	0	2	0	6	20.00
41-50	2	0	0	1	0	0	3	10.00
Total	15	7	3	1	3	1	30	100.00

Table 2 shows that the distribution of causes according to age group. In this study, age varied from 4 years to 50 years. Majority of patients, 14 (46.67%) were belongs to age group 21-30 years, which is approximately half of the total admitted patients. Appendicular pathology, tubercular lesion is commonest in age group 21-30 years. A patient with carcinoma caecum is found in the age group 41-50 years and a patient with appendicular abscess is detected in the age group 11-20 years (table 2)

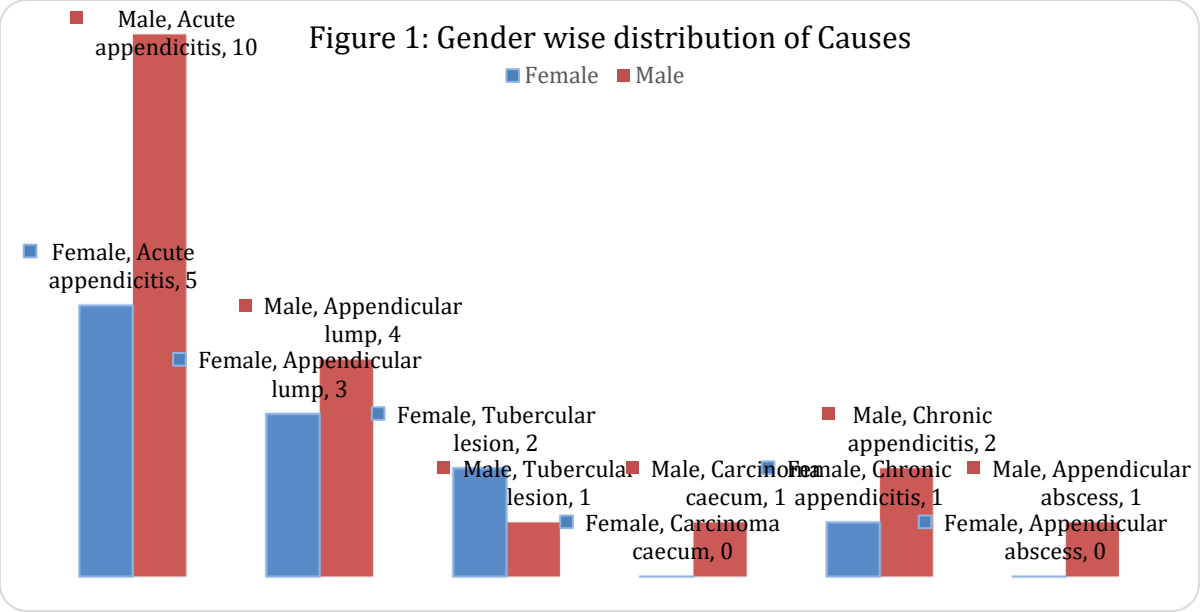


Figure 1 depict that the distribution of causes according to gender of admitted patients. In this study 11 (36.67%) were female and 19 (63.33%) were male patients. Out of total patients, approximately half of patients were having acute appendicitis in both the groups. No any female patients detected with carcinoma caecum and appendicular abscess.

Table 3: Endoscopy and imaging as per diagnosis.

Diagnosis	**USG**	**CT**	**Colonscopy**
Acute appendicitis	15	0	0
Appendicular lump	7	0	0
Tubercular lesion	3	3	3
Carcinoma caecum	1	1	1
Chronic appendicitis	3	0	0
Appendicular abscess	1	1	0
Total	30	5	4

(Table 3) shows that the endoscopy and imaging as per diagnosis. USG was done in all patients; CT scan was done in 5 patients and colonoscopy was done in 4 patients.

Table 4: Treatment as per diagnosis.

Diagnosis	Number of cases	Conservative management	Surgery
Acute appendicitis	15	0	15
Appendicular lump	7	0	7
Tubercular lesion	3	3	0
Carcinoma caecum	1	0	1
Chronic appendicitis	3	0	1
Appendicular abscess	1	1	0
Total	30	4	24

Table 4 shows that the treatment of patients as per their diagnosis. All cases of acute appendicitis were managed immediate open appendectomy, all appendicular lumps were managed conservatively then Interval appendectomy was done in all 7 patients. Appendicular abscess was managed conservatively by only antibiotics no drainage was required. Carcinoma caecum was managed by right hemicolectomy, and ilieocaecal tuberculosis was managed conservatively.

Table 5.Dianostic test in Koch's abdomen

Increased serum adenosine deaminase	2 (66.67%)
Increased lymphocytes (>45%)	1 (33.33%)
Positive Montoux test	1 (33.33%)
Increased ESR	1 (33.33%)

Table5. Shows that in all 3 cases of tubercular lesion (Koch's abdomen), increased serum adenosine in 2 cases (66.67%), increased lymphocytes in 1 case (33.33%), Montoux test positive in 1 case (33.33%), increased ESR in 1 case (33.33%)

RESULTS;

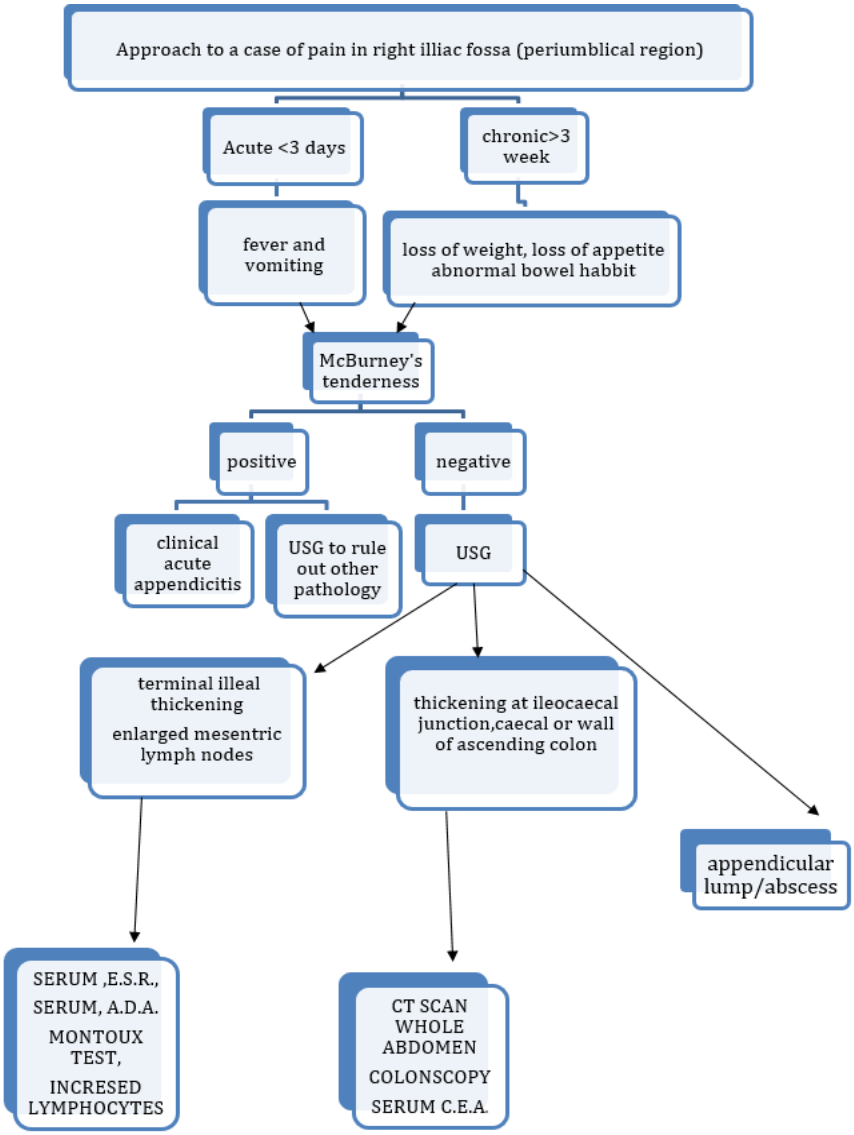
out of 30 cases, acute appendicitis were in 15 cases (50%),followed appendicular lump(7 cases ,23%), irritable bowel disease (3 cases,10%),tubercular lesion (2 cases,6.7%),carcinoma of caecum (1 case,3.33%), appendicular abscess(1 case,3.33%) , both appendicitis with tubercular lesion were also present (1 case,3.33%).In this study, all aged varied between 10 to 60 years, USG was done in all cases, CT scan was done in 5 cases and colonoscopy was done in 4 cases. Serum adenosine deaminase was sent in all case of tubercular and positive only in one case. Montoux test was done in all tubercular case and positive only in one case. Differential leucocytes count was done in all cases and only one case has increased lymphocyte (65%) >45% in tubercular patient two patient positive with ESR

All cases of acute appendicitis were managed immediate open appendectomy, all appendicular lumps were managed conservatively then Interval appendectomy was done in all 7 cases. Appendicular abscess was managed conservatively by only antibiotics no drainage was required. Carcinoma caecum was managed by right hemicolectomy, and ilieocaecal tuberculosis was managed conservatively.

Discussion

In this study we observed a definite line of investigation that can help to confirm diagnosis. All cases after clinical evaluation have USG. Only 5 cases undergo CT scan and in 4 cases colonoscopy were performed. Even 7 cases of appendicitis were not diagnosed by USG. Appendicular lump, inflamed appendix and appendicular abscess was diagnosed only by USG. If USG was suggestive of ilieal thickening, enlarged mesenteric lymph nodes, thickening of caecum and ascending colon, then CT scan was advocated. If diverticulitis, colitis, ulcerative lesion, ceacum and ascending wall thickening were present in CT scan then colonoscopy was advised. CT scans sensitivity 90% for acute appendicitis [6] and for neoplastic lesion its sensitivity is about 70% [7]. Alvarado scores frequently used for diagnosis

of appendicitis but still not fully validated, and not widely used [8]. This study focus on how surgeon should approach to a case of right iliac fossa pain (periumlical). After detailed clinical evaluation if patient has fever, nausea and vomiting and McBurney's tenderness then most probable diagnosis is acute appendicitis. Many signs like as pointing sign, rovsing'sign, psoas sign, obturator sign that was used initially to diagnose for acute appendicitis, now not in used frequently because of frequently use of analgesic drug. If McBurney's tenderness negative and associated with loss of weight, loss of appetite, altered bowel habit then advised USG. If USG suggestive of terminal ilieal thickening, enlarged mesenteric lymph nodes, then further serological investigation like as increased lymphocytes, ESR, S.ADA, MANTOUX TEST must be done and if among theses any one test if positive then treat as a case of Koch's abdomen. And if thickening at ileocaecal junction caecal or ascending wall thickening then CT scan, S.CEA and also advised for colonoscopy guided biopsy if possible. Regarding management all cases of acute appendicitis was managed by immediate open appendectomy while all cases of appendicular lump was managed first conservatively and after 4 weeks interval open appendectomy was performed. In all tubercular case anti tubercular treatment was provided no surgery was performed. Carcinoma of caecum was operated and right hemicolectomy was done. Appendicular abscess was managed in this case only with antibiotics. Limitation of study was that small number of patients and value of above marker are not very specific.



Conclusion

Pain in right iliac fossa is common symptoms. It varied widely with age and sex. Commonest presentation is acute appendicitis in younger age while in old person, neoplastic lesion is common. In female, diagnosis become more challenging therefore approach to a case of right iliac fossa pain is very interesting even good clinician missed right diagnosis. Be very cautious during clinical evaluation then first investigation USG must be advised. If beyond appendicular lump, inflamed appendix and appendicular abscess there is terminal illeal thickening, enlarged mesenteric lymph nodes then suspect as case of Koch's abdomen and further investigate. If thickening of ilieocaecal junction and ascending colon then advised for CT scan. If CT scan is still unclear about the diagnosis either infective or tubercular or ileoascending colon thickening then serum CEA and colonoscopy must be advised. However All these are only supportive test not confirmatory they only support and strengthen your clinical diagnosis. Before validate this protocol a large data must be needed

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