“Right Iliac Fossa Mass A Clinical Study”

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Abstract

Background: The mass in the abdomen has wide spread implications and long exercised the minds of many researchers and health care providers. Right iliac fossa mass is a common condition encountered in our surgical practice. Aim: To study various diseases which can presents as mass in the right iliac fossa. To study age and sex distribution of various condition. Methodology: This is a study of 50 cases of mass in the right iliac fossa admitted to Govt. Royapettah Hospital Chennai during the period from January 2015 to Dec 2015. This study includes selection of patients with mass in right iliac fossa on a randomized and prospective basis. Results: In this study 56% of cases were related to appendicular pathology. 18% cases were Ileocecal tuberculosis. Incidence more common in 3rd decade. Conclusion: Appendicular pathology was the commonest pathology seen in the right iliac fossa region. Ileocecal tuberculosis is one of the differential diagnosis for the chronic abdominal pain in the rural population.

Keywords: Right iliac fossa mass, appendicular mass, ileocecal TB

Date of Submission: 12-03-2018
Date of acceptance: 28-03-2018

I. Introduction

Mass in the abdomen, by reason of their wide spread implications, has exercised the minds of many workers. Mass in the right iliac fossa is a common entity. Pandora's box—hackneyed phraseology is apt in case of mass in the right iliac fossa. Patient with mass in the right iliac fossa may confront the surgeon, pediatrician obstetrician and gynaecologist. A thorough understanding of the anatomy and pathological processes that may occur within the abdomen are essential for an accurate diagnosis and management. Some patients will need immediate surgical intervention, whereas others will improve with conservative treatment. The purpose of the present study is to find certain well-defined clinicsopathological entities, common in the right iliac fossa, the relative occurrence of various pathologies, as seen in the Govt. Royapetah Hospital, Chennai in the overall endeavour to reduce morbidity and mortality rates.

II. Objectives

- To study various diseases which can presents as mass in the right iliac fossa.
- To study age and sex distribution of various conditions.
- To study various modes of management.

III. Methodology

This is a study of 50 cases of mass in the right iliac fossa admitted to Govt. Royapettah Hospital, Chennai during the period from January 2015 to December 2015. This study includes selection of patients with mass in the right iliac fossa on a randomized and prospective basis. The patients are selected after they are diagnosed as having intra-abdominal mass in the right iliac fossa of various pathologies after careful history taking, thorough general and local examination and appropriate investigations. Female patients with pathologies related to uterus and its appendages were not included in this study. Similarly mass from anterior abdominal wall and bone were not included in this study. All clinical findings were recorded in the proforma casesheets. With each patient admitted with mass in the right iliac fossa, cordial interrogation session was held to obtain particulars of the disease. Detailed history was carefully elicited to chart the symptoms. Patient was subjected to methodical physical examination to assess his general condition and to know the basic vital data on admission. Local examination of abdomen was done in a methodical way and relevant findings were recorded. Rectal examination was done in all cases, while per vaginal examination was also done in female patients. Systemic examination like respiratory system and cardiovascular system were done routinely. All relevant and routine investigations were done in these cases to establish the
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diagnosis. Ethical clearance has been obtained for the same. Patients were asked to present themselves for follow-up after a specific interval or at recurrence of symptoms. Meanwhile all patients received supportive treatment aimed at correction of dehydration, anaemia, vitamin and other nutritional deficiencies. (Antihelmenthics were given whenever indicated). Respiratory and other infections were treated with appropriate antibiotics. Bowel preparation was done in all cases requiring exploratory laparotomy. During laparotomy, intra-abdominal examination of all organs was made in addition to specific pathology and specific surgery was done in each case. Postoperative follow-up was meticulously done, intake output charts and vital charts were maintained. They were given antibiotics, analgesics and sedatives if needed. Most of the operated patients had uneventful recovery. Drains were removed after 48 hours and sutures were removed on the 7th post-operative day.

IV. Results

This study of 50 cases of mass in the right iliac fossa was done over a period of 12 months January 2015 to December 2015. In this study of 50 cases 56% of cases were related to appendicular pathology either in the form of appendicular mass or appendicular abscess. There were 9 cases of ileocaecal tuberculosis. In this study, the youngest patient was of age 12 years, who presented with appendicular mass and the oldest was 68 years of age admitted with carcinoma of the caecum. There were 9 cases of ileocaecal tuberculosis. In this study, appendicular mass manifested most commonly in 3rd decade (36%) and followed by 2nd decade (27%). Ileocaecal tuberculosis was common in the middle age group (i.e., 3rd and 4th decade) covering about 77% of cases. Carcinoma of the caecum was common in older age group (75%). In the present study, appendicular mass (73%), appendicular abscess (67%) were common in males. In ileocaecal tuberculosis incidence in males was almost 90%. Incarcinoma of the caecum the incidence was more in females. More than 50% cases in this study were from rural areas and of low socioeconomic status, where prevalence of tuberculosis is more. In this study 6 cases of appendicular mass were diagnosed with tuberculosis. In present study patients with appendicular mass presented with pain initially around umbilicus which later shifted to right iliac fossa. 95% of cases of appendicular mass presented within 30 days. Pain was colicky in nature and associated with vomiting. Some patients of ileocaecal tuberculosis presented with colicky abdominal pain and fullness in right iliac fossa. Some of them complained of constant dull pain in right iliac fossa interspersed with colicky abdominal pain 2-8 hours after taking food. Pain was relieved usually by passing stools. In this study 22 cases presented within 1 month, 55 cases presented between 1-3 months and another 22% presented after 6 months. In this study unascended kidney and actinomycosis were included in others group. In this study 54% of appendicular mass presented with fever and 40% presented with vomiting. In cases of appendicular abscess 50% presented with fever and 33% presented with vomiting. Out of 9 cases of ileocaecal tuberculosis, 4 cases presented with fever, 3 cases with vomiting and 4 cases with loss of weight. In 8 cases of carcinoma of the caecum 4 cases gave history of occasional vomiting and almost all cases gave history of loss of weight. In present study of 50 cases, 90% cases had tenderness in right iliac fossa. 9 patients had a mass which was hard in consistency which included all the 8 cases of carcinoma of the caecum and 1 case of actinomycosis. 64% of patients had a mass which was firm in consistency which includes most cases of appendicular mass and ileocaecal tuberculosis. Remaining 18% cases had masses of soft consistency which included appendicular abscess and psoas abscess. 31 of 50 cases presented with swelling which were fixed. In this group 8 included patients of carcinoma of the caecum, appendicular mass and few cases of ileocaecal tuberculosis. In this study 38% cases had HB < 10 gm. Most of the cases of ileocaecal tuberculosis and carcinoma of the caecum were in this group.

In present series contrast x-ray barium studies were done in cases of carcinoma of the caecum and ileocaecal tuberculosis. In ileocaecal tuberculosis main feature was pulled up caecum with narrowed ileum. In carcinoma of the caecum main feature was irregular filling defect with shouldering sign positive.

In our study of 50 cases, 8 cases were managed conservatively and 42 cases were managed surgically. Out of 22 cases of appendicular mass, managed surgically 9 cases were taken up for surgery immediately whereas rest of the 13 cases were managed by Oeschnerscherren regime and appendicectomy was done at a later date in 9 cases, 4 patients did not turn for surgery.

All 6 cases of appendicular abscess and 3 cases of psoas abscess were managed by extraperitoneal drainage. These 6 cases of appendicular abscess were subjected to interval appendicectomy 6-8 weeks later. 8 out of 9 cases of ileocaecal tuberculosis were managed surgically 1 case was not operated because of associated active pulmonary tuberculosis. 6 out of 8 cases of carcinoma of the caecum were operated upon. 2 cases were not operated as there were multiple secondaries in liver. 1 case of unascended kidney surgery was not done. In all 6 cases of appendicular abscess, extraperitoneal drainage of pus was done immediately and interval appendicectomy done after 6 weeks. In 8 cases of ileocaecal tuberculosis managed surgically, for 3 cases, limited ileocaecal resection with end to end anastomosis was done. Wherein 4 cases of ileocoeal tuberculosis were put on ATT.
V. Discussion

This study of Mass in the right iliac fossa was made at Govt. Royapettah Hospital Chennai from January 2015 to December 2015. 50 cases of mass in the right iliac fossa were studied.

Appendicular mass

This formed 44% of cases of present study. All the patients came to the hospital for pain of duration of less than one month. They complained of colicky pain, initially around umbilicus which later shifted to right iliac fossa. Some patients had associated vomiting. According to R.C. Nagar et al appendicular mass was more common in 3rd, 4th and 2nd decades of life. Male to female ratio was 19:4 (4.7:1). In present study maximum age incidence was in 3rd decade (36%) followed by 2nd decade (27%). It was more common in males than females (2.6:1). Only two patients complained of mass in present series. But all examined cases were found to have mass in the right iliac fossa. According to Bailey and Love (1934), after the commencement of an attack of acute appendicitis, a tenderness can frequently be felt in the right iliac fossa beneath some rigidity of the underlying musculature, the other quadrant soft, the abdomen being free from rigidity or tenderness.

According to R.C. Nagar et al, 38 out of 46 cases had rigidity and tenderness was present in 43 out of 46 cases. In present series, history of pain and vomiting is given by all patients. All patients had masses which were tender and firm. If present, appendicectomy was done and if remaining mass was present, 83% were managed conservatively. In present series, cases which were managed conservatively were called back for appendicectomy 6 weeks later. Specimens of appendix after appendicectomy were sent for histopathological examination and were all reported as chronic appendicitis.

Appendicular abscess

These patients formed 12% of the present group study. 50% of the cases were in 4th decade and 67% cases were males. All the patients presented within 1 month of symptoms. According to Edward L. Bradley III et al, mean age at which appendicular abscess occurred was 40.7 ± 2.7. Symptoms had been present on an average of 9.2 ± 0.8 days prior to admission. In present study initially pain was colicky and then it progressed to pricking/throbbing type. 33% of cases complained of mass per abdomen and it was tender and soft in consistency. Fever was present in 50% of cases. According to Hurme et al, in his study of 147 patients, 47% were primarily treated conservatively, of them 9% had to be operated on in an acute phase because of worsening of symptoms. Rest 53% were operated on primarily of which 28% had complications. In 31% of cases managed conservatively, interval appendicectomy was done and 12% were treated conservatively only. In present study, all cases were taken up for immediate external peritoneal drainage of abscess, which is a preparation for interval appendicectomy. In all cases interval appendicectomy was done and histopathology report showed chronic appendicitis.

Ileoocaecal tuberculosis

Tuberculosis of the gastrointestinal tract presents as common diagnostic and therapeutic problem to a surgeon in most countries. In this series ileocaecal tuberculosis formed 18%. In present study 22% of cases of ileocaecal tuberculosis had associated pulmonary tuberculosis. 80% of cases of ileocaecal tuberculosis were from rural areas. According to ATM Prakash et al, incidence rate of this disease was high in age group 20-40 years. In present study all patients were above 30 years age group with mass incidence between 30-40 years. Predominantly affected people were the males. Tuberculosenteritis is commonest in the ileocaecal region and is a series conducted by Bhansali S.K. followed by involvement of ileum, which is a common site. In present study all cases had involvement of caecum with associated involvement of ileum in few cases. According to Prakash et al, in his study, both obstructive and non-obstructive groups have abdominal pain as the commonest symptom. In the latter it may be colicky in nature, but in many cases related to umbilicus and right iliac fossa.

In present series, all patients complained of pain in right iliac fossa. All these patients had associated fever, vomiting, mild degree and history of evening rise of temperature. Loss of weight and appetite were also present in these patients.

In their study 62.3% of cases presented with bowel symptoms. Tenderness was present in 58% cases and 63% cases presented with mass. Altered bowel habits were present in present study of 22% cases. In 66% of cases tenderness was present and 22% of cases presented with mass in the right iliac fossa. According to S.K. Bhansali et al, 60% of chronic cases of ileocaecal tuberculosis presented as mass in the right iliac fossa which may simulate either Crohn's disease, an appendix mass or a malignant lesion of the caecum or ascending
colon. Hyperplastic ileocaecal tuberculosis or lymphadenitis is the cause for it. In present study only 22% of cases of ileocaecal tuberculosis complained of mass but on examination all the patients were found to have mass in the right iliac fossa.

In present study in 77% of cases duration of symptoms was less than 3 months and in others it was more than 6 months. According to Prakash et al, 27% cases had duration of symptoms < 6 months and 43% cases had duration ranging from 6 months to 3 years. Rest ranged > 3 years.

According to Schoefield PF., Anscombe A.R. and Keedie N. C. in ileocaecal tuberculosis there are characteristic radiological appearances in barium enema examination like caecum is pulled up, ascending colon shortens, ileum retains its normal calibre.

In present study, contrast X-ray barium enema study was done in all cases. Narrowing of terminal ileum, obtuse ileocaecal angle and pulled up caecum were the main radiological features. I.P. Elhence and B.D. Sharma et al said that clinical subjective improvement after surgery occurred after 2-6 months of ATT which maybe because of surgical removal of basic tuberculous lesion.

In present study 87% cases underwent definitive surgery and followed by they were put on antituberculous therapy. These patients responded well and had clinical improvement. According to Ramesh C. Bharati et al who did a study of pattern of surgical emergencies of tuberculous abdomen, they did right hemicolectomy in 4.5% of cases limited resections in 6% cases and stricturoplasties in 36% cases. In present study of 9 cases of ileocaecal tuberculosis limited ileocaecal resection was done in 37% cases and because of extensive associated involvement of ascending colon right hemicolectomy is done in another 50% cases. Intwocasetherewasanassociated stricture for which stricturoplasty was done.

Carcinoma caecum

Carcinoma, caecum formed 16% of cases of present study. 75% cases were seen in the age group above 50 years and oldest patient of this study was aged 68 years.

According to Crerand S et al in the series of 1553 patients who presented with primary colorectal cancer, over a period of 30 years at Mater Misericordiae Hospital, Dublin 39% patients were aged over 70 years and 51% were between 50-69 years. 70% carcinomas were left sided, 22% carcinomas were right sided and carcinoma caecum accounted for 18%. According to their study carcinoma caecum was more common in patients over 69 years and in elderly females and 30% of colorectal carcinomas occurred in caecum. In present study 6 out of 8 cases presented with mass and dull aching pain. Average duration of symptoms was from 1-6 months, 50% of cases had vomiting and 87% cases had loss of weight. In Goligher series growths of the caecum, ascending colon and hepatic flexure bowel symptoms were usually completely absent. In many instances the only manifestation will be of deterioration of general health with loss of weight and anaemia. In present series, 87% cases had a haemoglobin level of lower than 10 g percent.

According to Goligher J.C in majority of cases of carcinoma caecum constant but not very severe abdominal pain was experienced in the right iliac fossa or subcostal or epigastrium often associated with local tenderness. Abdominal mass was felt in few cases usually in the right iliac fossa. In present series, all the patients presented with mass in the right iliac fossa and dull aching pain. Mass was hard in consistency tender and fixed. They had a dull note on percussion. In present study, 87.5% of cases were diagnostically accurate by USG. According to Goligher’s experience with regards to growth of caecum and ascending colon, he recommends extensive right hemicolectomy except when patients general condition is such that completion of resection is not possible. In present study the general condition of the patient was improved by giving high protein diet, haematinics and bowel was prepared. Laparotomy was performed and right hemicolectomy was done. In this group in present study two different cases were included. A case of Actinomycosis and unascended kidney.
VI. Figures And Tables

Table 1: Incidence of Various Conditions

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<tr>
<th>Sl. No.</th>
<th>Diagnosis</th>
<th>No. of Cases</th>
<th>11-20 Years</th>
<th>21-30 Years</th>
<th>31-40 Years</th>
<th>41-50 Years</th>
<th>51-60 Years</th>
<th>61-70 Years</th>
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<td>8</td>
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<td>1</td>
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<td>-</td>
<td>1</td>
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<td>3</td>
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<td>-</td>
<td>4</td>
<td>1</td>
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<td>1</td>
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<td>4</td>
<td>Carcinoma caecum</td>
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<td>1</td>
<td>-</td>
</tr>
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<td>6</td>
<td>Others</td>
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<td>11</td>
<td>6</td>
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Table 2: Sex Incidence

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<th>Female</th>
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<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>1</td>
<td>Appendicular mass</td>
<td>16</td>
<td>73</td>
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<tr>
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<td>Appendicular abscess</td>
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<tr>
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<td>Total</td>
<td>(50)</td>
<td>38</td>
<td>76</td>
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</table>

VII. Conclusion

The highest incidence of mass in the right iliac fossa was seen in the 3rd and 4th decade. Most of our patients were of low socio-economic status. Detailed history taking and complete clinical examination to be done for the early correct diagnosis. Though appendicular pathology and tuberculosis are common in right iliac fossa, surgeon...
should consider other rare causes in order to diagnose and treat them at the earliest.

References