A COMPARATIVE STUDY BETWEEN EARLY EXPLORATIONS VERSUS CONSERVATIVE MANAGEMENT IN MANAGEMENT OF APPENDICULAR LUMP

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Abstract

Background: Acute Appendicitis is one of the most common acute surgical conditions of the abdomen and appendicular lump is formed if treatment is delayed. Appendicular mass is one of its early complications developing in 2-6% cases within 48 hours of attack. The traditional treatment of appendicular lump is conservative followed by delayed appendectomy. During conservative treatment 10-20% is not resolved and leads to gangrene or perforation followed by localized abscess or generalized peritonitis requiring early surgical intervention.

Aim and Objective: To evaluate the outcome of early surgical exploration and its complications in respect to conservative management of appendicular lump.

Material and Methods: Total of 48 patients admitted with diagnosis of appendicular lump were included in our study. This prospective study was conducted in Department of General Surgery of Index Medical College, Hospital and Research Centre, Indore, M.P over period of 2 years [August 2019 to July 2021] in all age group and both sexes.

All cases were divided randomly into two groups. Group I, early surgical exploration and Group II, conservative approach with OCHSNER SHERREN REGIME followed by interval appendectomy after 6 weeks.

Results: Total 471 patients admitted to hospital with diagnosis of acute appendicitis, out of which total 48 patients were having Appendicular lump suggestive of incidence of 9.81%. Maximum patients were found in age group 21-30 years. Average duration of symptoms was 2 days. Two methods were adopted for the management of appendicular lump. The first group included 24 patients who were operated immediately after investigations and second group of 24 patients were managed conservatively followed by delayed appendectomy. In the first group mean hospitalization time was 4 days. Residual abscess, adhesive intestinal obstruction, failure of treatment and readmission were not found. In the group II, mean hospitalization time 10 days, more chances of residual abscess, adhesive intestinal obstruction, failure of treatment and readmissions were noted.

Conclusion: In our study, it can be concluded that early surgical exploration confirms diagnosis and cures the problem, reduce the cost of management, shortens the convalescence and hospital stay with reasonably satisfactory outcome.

Key-Words: Appendicular Lump, Ochsner-Sherren Regime Appendectomy.

Introduction

Acute Appendicitis is the commonest cause of "acute surgical abdomen". The definitive treatment of acute appendicitis is appendicectomy. If timely appendectomy is not done, 2-6% of the patients develop a mass in the right iliac fossa (Appendicular Lump) as one of the early complications. The conventional conservative treatment followed by delayed appendectomy in patients with appendicular mass is well recommended. Majority of the time appendicular lump resolve after conservative management but some 10-20% of such patients fail to respond and require urgent and more difficult operation.

Moreover, 7-46% of the patients suffer a recurrence of acute appendicitis or appendicular mass following discharge from the hospital after successful conservative treatment of appendicular mass. Misdiagnosis is another problem. Condition such as caecal carcinoma in middle aged or elderly, intussusception in children and ileocaecal

tuberculosis at any age may mimic appendicular mass. With the availability of modern operative and anesthesia facilities and to avoid uncertain natural course and misdiagnosis, an early exploration of the appendicular mass is recommended. This shortens the hospital stay, cures and diagnoses the disease and obviates the need of second hospital admission with no added morbidity and mortality. In the modern era where facilities and expertise of laparoscopic surgery is available, laparoscopic appendicectomy for both complicated (appendicular lump) and uncomplicated appendicitis is recommended where possible which further lessens morbidity. Based on these studies, the present study was done with objective of comparison of early exploration versus conservative management of appendicular lump.

Materials and Methods

Study design and setting: This prospective study was conducted in Department of General Surgery of Index

Medical College, Hospital and Research Centre, Indore, M.P during August 2019 to July 2021. A total of 471 patients with appendicular lump and acute appendicitis were admitted over a period of two years.

Inclusion Criteria: All age patients and both sexes were included.

Exclusion Criteria: Any patients whose diagnosis was changed after initial diagnosis was changed after initial diagnosis of appendicular lump were excluded from the study.

Thorough clinical examination was done. Complete blood count, ESR, Urinalysis, Urea, Creatinine and Electrolytes, plain X-ray abdomen and Ultrasonography of abdomen and other investigations as per the need of the patients were done.

The patients were divided randomly into two groups each containing 24, in Group I early surgical exploration was done. In Group II conservative approach with OCHSNER SHERREN REGIME followed by interval appendectomy. Comparison of outcome between two groups was done

Results

The outcome of present study as tabulated in tables 1 to 7. There was not a big difference in post-operative wound sepsis in each group. Patients in Group II developed residual abscess which was not seen in Group I. 1(4.17%) patient in Group II developed adhesive intestinal obstruction while no one in Group I. No chest complications were seen in both groups. 2(8.33%) patients in Group II failed to respond to conservative treatment where intervention was done rather in a difficult situation

Table 1: Age Distribution

Age Group	Frequency (n=48)	%
11-20	9	18.75
21-30	25	52.08
31-40	11	22.92
41-60	3	6.25
>60	0	0

Table 2: Gender Distribution

Gender	Frequency (n=48)	%
Male	20	41.67
Female	28	58.33
Total	48	100

Table 3: Duration of Symptoms at presentation

Duration of Symptoms	Frequency (n=48)	%
Less than or equal to 2	20	41.67
3-4	14	29.17
5-6	10	20.83
>6	4	8.33

Table 4: Symptomatology of Patients

Symptoms	No.	%
Site of Onset of Abdominal Pain	Periumblical	24
	Generalized Abdominal Pain	12
	Epigastric	02
	Right Lower Abdomen	20
Shifting of Pain	Shifted	36
	Not shifted	12
GI Upset*	Present	44
	Absent	04
Temperature (fever)	Raised	22
	Normal	26

*GI Upset: nausea/vomiting, anorexia, loose stool and constipation

Table 5: Operative Findings & Procedure (n=28)

Operative Finding	Procedure	No.	%
Suppurative appendix	Appendectomy	16	57.14
Gangrenous appendix	Appendectomy	06	21.42
Perforated appendix and appendicular abscess	Drainage of abscess and appendectomy	04	14.28
Normal appendix	Nil	Nil	Nil

Table 6: Post-Operative Complications

Complications	Group 1 (n=24)	Group 2 (n=24)
Wound infection	2(8.33%)	1(4.17%)
Residual abscess	0(0%)	1(4.17%)
Faecal fistula	0(0%)	0(0%)
Adhesive intestinal obstruction	0(0%)	1(4.17%)
Chest complication	0(0%)	0(0%)
Haematoma	1(4.17%)	0(0%)
Incisional hernia	0(0%)	0(0%)
Failure of treatment	0(0%)	1(4.17%)
Lost in follow-up	1(4.17%)	2(8.33%)
Misdiagnosis	0(0%)	1(4.17%)
Readmission	0(0%)	2(8.33%)

Table 7: Hospital Stay

Hospital stay	Group 1	Group 2	Total
Less than 3 days	16	4	20
4-6 days	5	16	21
More than a week	3	4	7
Total	24	24	48

2(8.33%) of patients in Group II lost to follow up. 1 patient in Group II was ultimately diagnosed as ileocaecal tuberculosis which had been treated as appendicular mass. 2 patients in Group II needed readmission for recurrent acute appendicitis or appendicular mass again. 16 patients of Group I had hospital stay less than three days and 3 more than one week. On the other hand, 4 patients in Group II had hospital stay more than one week and 4 less than three days.

Discussion

Acute appendicitis is a very common surgical cause of acute abdomen. With prolongation of duration of symptoms, in some patients appendicular lump developed which is an inflammatory mass composed of inflamed appendix, caecum, omentum, terminal ileum and mesoappendix at times sigmoid, right tubes and ovaries in female. This has been attributed to a protective mechanism of body to prevent the spread of infection. In our study, we found that the incidence of appendicular lump was 9.81% and this is comparable with other author's study varying 2-6%.

The maximum patients 25(52.08%) in this study were between the age group of 21-30 years. However the age varied from 11 years to 59 years suggesting any age group prone to develop lump, but common in younger age groups. The male to female ratio of 0.72:1 is also comparable with another study.

Majority of the patients who presented with lump had symptoms for less than or equal to 2 days. However, some even presented with symptoms for 14 days.

The history of shifting pain in 75% of patients, the gastrointestinal upset in form of nausea, vomiting, decreased appetite; loose stools or constipation in 91.67% of the patients in this comparative study is comparable with other studies. 46% of the patients were febrile. The presence of

suppurative, gangrenous or perforated appendix with abscess in the appendicular mass corresponds with literature.

The wound sepsis was found in 2 cases in Group I while 1 in Group II is also comparable with another study where wound sepsis was 10% in non-perforated and 20% in gangrenous perforated appendix. The other complication such as failure of conservative treatment, misdiagnosis, readmission for recurrent acute appendicitis and lost to follow up are noted less in early exploration.

The short hospital stay of less than 3 days in 67% of the patients in Group I is comparable with another study.

Conclusion

The traditional method of conservative management of appendicular lump is well known. The patients are managed on OCHSNER SHERREN REGIME and stays in hospital for 7-10 days. All the patients do not respond uniformly. In a significant number of patients, the regimen fail and surgical intervention has to be made rather in a difficult situation. Misdiagnosis in the form of ileocaecal tuberculosis, carcinoma of caecum and intussusception is another enigma.

Now with the availability of better anesthesia, good antibiotics and better surgical expertise, the appendicular mass of any duration can be explored early. Early exploration for appendicular mass had advantages of confirmation of the diagnosis, total curative treatment in the index admission, reduces the cost of management, shortens the sickness period and hospital stay with reasonably satisfactory outcome.

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