RESEARCH ARTICLE

MANAGEMENT OF APPENDICULAR LUMP: EARLY EXPLORATION VS CONSERVATIVE MANAGEMENT

Chandra Pandey[1], Ram Kesharwani[1], Chandra Chauhan[1], Manmohan Pandey[2], Purnima Mittra[3], Pramod Kumar[4], Arshad Raza [1]

[1] Department of Surgery, Rohilkhand Medical College, Bareilly, Uttar Pradesh, India
[2] Department of Medicine, Rohilkhand Medical College, Bareilly, Uttar Pradesh, India
[3] Department of Pathology, Rohilkhand Medical College, Bareilly, Uttar Pradesh, India
[4] Department of Radiology, Rohilkhand Medical College, Bareilly, Uttar Pradesh, India

Correspondence to: Chandra Pandey (cppandey19@yahoo.com)

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ABSTRACT

Background: Acute appendicitis is one of the most common acute surgical condition of the abdomen and appendicular lump is formed if treatment is delayed. It is encountered in 2 – 6%of patients. The traditional treatment of appendicular lump is conservative followed by delayed appendectomy. During conservative treatment 10-20% are not resolved and lead to gangrene or perforation followed by localized abscess or generalized peritonitis requiring early surgical intervention.

Aims & Objective: A comparison of early exploration versus conservative management of appendicular lump.

Material and Methods: A total of 632 patients were admitted in emergency and OPD of this hospital with diagnosis of appendicular lump and acute appendicitis over a period of three years, all were included in the study. All age groups and both sexes were included. The patients were divided randomly into two groups. Group I, early surgical exploration and group II, conservative approach with OCHSNER SHERREN, REGIME followed by interval appendectomy.

Results: Out of 632 patients, only 62 patients who presented with appendicular lump were reviewed, suggesting 9.81% incidence. Maximum patients were found in age group of 21–30 years. Average duration of symptoms was 4 days. Two methods were adopted for the management of appendicular lump. The first group included 31 patients who were operated immediately after investigations and second group of 31 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 observed. In the II group mean hospitalization time 10 days, more chances of residual abscess, adhesive intestinal obstruction, failure of treatment and readmissions were noted.

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

Key-Words: Appendicitis; Appendicular Lump; Appendectomy; Early Exploration; Conservative Management

Introduction

Acute appendicitis is the most common acute surgical condition of the 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.[1,2] The conventional conservative treatment followed by delayed appendectomy in patients with appendicular mass is well recommended. Majority of the times appendicular lump resolve after conservative management but some 10 – 20% of such patients fail to respond and require urgent and more difficult operation.[1]

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, intussusceptions in children and ileocaecal tuberculosis at any age may mimic appendicular mass.[1-7] With the availability of modern operative & anesthesia facilities and to avoid the 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 a second hospital admission with no added morbidity and mortality.[1,8,9] In this 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 lessen 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

A prospective study was conducted in the department of Surgery of Rohilkhand Medical College & Hospital, Bareilly, UP from December 2009 – January 2012. A total of 632 patients with appendicular lump and acute appendicitis were admitted over a period of Three years. All age groups and both sexes were included. Any patients whose diagnosis was changed after initial diagnosis of appendicular lump were excluded from the study. Through clinical examination was done. Complete blood count, ESR, Urinalysis, urea, Creatinine and electrolyte, plane X-ray abdomen and ultrasonography of abdomen and other investigations as per need of the patients were done.

Patients were divided randomly in two groups, each containing 31, in group one early surgical exploration was done. In group two, conservative approach with OCHSNER SHERREN REGIME was adopted 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. One patient in group I developed faecal fistula that was treated successfully with conservative treatment. 3 (9.67%) patients in group II developed adhesive intestinal obstruction while one in group I. Chest complication were more in group II due to prolonged hospital stay. Eight patients (25.8%) 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=62)	%
11 – 20	11	17.75
21- 30	30	48.39
31 – 40	16	25.80
41 – 60	5	8.07
>60	0	00

Table-2: Gender Distribution

Gender	Frequency (n=62)	%
Male	40	64.53
Female	22	35.49
Total	62	100

Table-3: Duration of Symptoms at Presentation

Duration of Symptoms (Days)	Frequency (n=62)	%
≤2	9	14.52
3 – 4	28	45.17
5 – 6	11	17.75
>6	14	22.59

Table-4: Symptomatology of Patients

Symptoms		No.	%
Site of Onset of Abdominal Pain	Periumbilical	34	54.84
	Generalized abdominal pain	8	12.90
	Epigastric	03	04.84
	Right lower abdomen	17	27.42
Shifting of Pain	Shifted	57	91.94
	Not shifted	05	08.07
GI Upset*	Present	58	93.55
	Absent	04	06.46
Temperature (Fever)	Raised	36	58.07
	Normal	26	41.94

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

Table-5: Operative Findings & Procedure (n=34)

Operative finding	Procedure	No.	%
Supurative appendix	appendectomy	25	73.53
Gangrenous appendix	Appendectomy	05	14.70
Perforated appendix and appendicular abscess	Drainage of abscess and appendectomy	04	11.77
Normal appendix	Nil	Nil	Nil

Table-6: Post-Operative Complications

Complications	Group I (n=31)	Group II (n=31)
Wound infection	3 (9.67%)	2 (6.45%)
Residual abscess	0 (0%)	2 (6.45%)
Faecal fistula	1 (3.22%)	0 (0%)
Adhesive intestinal obstruction	0 (0%)	3 (9.67%)
Chest complication	1 (3.22%)	5 (16.12%)
Haematoma	1 (3.22%)	0 (0%)
Incisional hernia	0 (0%)	0 (0%)
Failure of treatment	0 (0%)	3 (9.67%)
Lost in follow up	0 (0%)	2 (6.45%)
Misdiagnosis	0 (0%)	1 (3.22%)
Readmission	0 (0%)	8 (25.80%)

Table-7: Hospital Stay

Hospital Stay	Group I	Group II	Total
Less than 3 days	26 (83.87%)	0 (0%)	26 (83.87%)
4 – 6 days	5 (16.12%)	8 (25.80%)	13 (20.69%)
More than a weak	0 (0%)	23 (74.19%)	23 (37.09%)
Total	31	31	62

Two (6.45%) of patients in group II lost to follow-up. One patient in group II was ultimately

diagnosed as iliocecal tuberculosis which had been treated as appendicular mass. Eight patients in group II needed readmission for recurrent acute appendicitis or appendicular mass again. 26 patients of group I had hospital stay less than three days and none more than one weak. On the other hand, 23 patients in group II had hospital stay more than one weak and none 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 overies in females.[1,2] 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 the appendicular lump was 9.81% and this is comparable with other author's study varying from 2 – 6%.[2]

The maximum patients 30 (48.38%) 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 1.82:1 is also comparable with another study.[1]

Majority of the patients who presented with lump had symptoms between 3 to 4 days. However some even presented with symptoms for 14 days.

The history of shifting of pain in 91.94% of patients, the gastrointestinal upset in the form of nausea, vomiting, decreased appetite; loose stools or constipation in 93.55% of the patients in this study is comparable with other studies.[1] Sixty percent of the patients were febrile. The presence of supurative, gangrenous or perforated appendix with abscess in the appendicular mass corresponds with literature.[11]

The wound sepsis was found in 2 cases in group I while 3 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.[11]

The short hospital stay of less than three days in 80% of the patients in group I is comparable with another study.[11]

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 iliocaecal tuberculosis, carcinoma of caecum and intussusception is another enigma.

Now with the availability of better anaesthesia, good antibiotics and better surgical expertise, the appendicular mass of any duration can be explored early. It confirms the diagnosis, cures the problem, reduces the cost of management, shortens the sickness period and hospital stay with reasonably satisfactory outcome.

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