

**APPENDICULAR MASS- EARLY APPENDICECTOMY
VS INTERVAL APPENDICECTOMY****DR. SANJEEW KUMAR CHOUDHARY^{1*} AND DR. S. K. DHAKAITA²***1. Assistant Prof, Surgery, R. D. Gardi Medical College, Ujjain.**2. Associate Prof, Surgery, R. D. Gardi Medical College, Ujjain***ABSTRACT**

Appendicular mass is a well-known complication of acute appendicitis which is normally treated conservatively followed by interval appendectomy. The aim of the present study was determine the feasibility and safety of an early appendectomy in comparison to interval appendectomy. Descriptive and comparative. Place and Duration: Department of Surgery, R D Gardi Medical college, Ujjain from May 2010 to May 2013. 92 patients with appendicular mass were included in this study. Patients were randomly divided into two groups, A and B, regardless of age and sex. Immediate appendectomy was performed in group A patients after preliminary investigations, where as patients in group B were initially treated conservatively followed by interval appendectomy. Out of total 92 cases of appendicular mass, 62(67%) males and 30(33%) females were included in the study population ranging in age from 15 to 60 years. Post-operative wound sepsis occurred in 5 (10.8%) patients in group A & 2(4.3%) in group B. Treatment failure, patient compliance, re-admission and overall expenses are the main limitations in group B population. Early appendectomy may be as safe as and superior option in patients with appendicular mass compared to conventional treatment followed by interval appendectomy.

KEY WORDS: Acute appendicitis; appendicular mass; interval appendectomy.**DR. SANJEEW KUMAR CHOUDHARY**

Assistant Prof, Surgery, R. D. Gardi Medical College, Ujjain.

INTRODUCTION

Acute appendicitis is the most common abdominal surgical emergency¹. Appendicular mass or abscess is one of the outcomes of acute appendicitis on the third day (rarely sooner) of commencement of acute appendicitis, a tender mass can frequently be felt in right iliac fossa². This mass is composed of omentum, edematous caecal wall and edematous loop of ileum^{3,4}. In its midst is a perforated or inflamed appendix. Early appendectomy in cases of appendicular mass or abscess is an effective treatment strategy in this modern era due to low cost, reduced hospital stay and good patient compliance¹⁰. However, this surgical modality seems to be associated with a high risk of post-operative complications like intra-abdominal abscesses, ileal perforations, wound infections and enterocutaneous fistula. However, the treatment of appendicular mass remains controversial as there are several management options for appendicular mass^{5,6}. Traditionally, these patients are managed conservatively followed by interval appendectomy 4- 6 weeks later, believing that an early appendectomy in these cases is hazardous, time consuming and may lead to life threatening complications⁷. But unfortunately, this policy is not successful always. Some 10 to 20% of such patients fail to respond and require a delayed and potentially more difficult appendectomy with a possible laparotomy and bowel resection. This has prompted the authors to evaluate the feasibility and safety of immediate appendectomy in appendicular mass in our population by comparing the results of an equal number of patients treated conservatively followed by interval appendectomy.

AIMS AND OBJECTIVES

A comparison of early exploration versus conservative management of appendicular mass followed by interval appendectomy.

MATERIALS AND METHODS

Duration

3 years from May 2010 to May 2013

Inclusion Criterias -

1. Both males and females between 15 and 60 years of age.
2. Patients with a right iliac fossa mass consistent with appendicular mass.

Exclusion Criterias -

1. Age below 15 years and more than 60 years.
2. Symptoms less than 72 hours duration.
3. Immunocompromised patients.
4. Patients on conservative management who has to be operated due to failure of conservative t/t
5. Patients on conservative management who didn't reported for interval appendectomy

This comparative study is conducted at the department of surgery, R. D. Gardi Medical College, Ujjain, M.P. from May 2010 to May 2013. Ninety Two patients with an appendicular mass were included in the study. On the date of admission, all of these patients were clinically evaluated and subsequently undergo routine checkup. The patients were randomly divided into group A and group B. Both treatment options were explained to every patient and a well informed consent was taken from each patient. The patients in Group A were operated within 24 hours of admission. Meanwhile, patients in group B were initially kept on conservative treatment comprising hospitalization with intravenous fluids, broad-spectrum antibiotics like Ceftriaxone, Metronidazole and analgesics. The progress of the mass was observed and the vitals were recorded regularly to monitor the response to conservative treatment. The patients in group B were discharged after complete resolution of the acute inflammatory mass and re-admitted after 6-8 weeks for interval appendectomy. The variables studied in both groups included operative difficulties, total operating time, operative and post-operative complications, total duration of hospital stay and patient compliance.

OBSERVATION AND RESULTS

The study included 62 males (67%) and 30 (33%) females with a range of 15-60 years of

age. The major clinical features included tenderness in the right iliac fossa, vomiting, palpable mass in right iliac fossa, anorexia, tachycardia and low grade pyrexia. 75% of the patients had a leucocytosis of more than 11000/cmm, while a neutrophilia of >75% was present in 80% cases. Interval appendectomy needed lengthening of incision to overcome the difficulty in dissection due to firm adhesions in 6 (13%) patients. Pattern of post-operative

complications in both groups is shown in Table-4. The total hospital stay was significantly shorter in Group A patients as shown in Table-3. The total hospital stay in group A patients included only one hospital admission compared to group B patients who were admitted twice. Patients on conservative management remained hospitalized for 4–10 days during their first admission and for another 2–8 days after interval appendectomy.

**TABLE NO. 1
SEX DISTRIBUTION OF PATIENTS**

SEX	NO. OF CASES	PERCENTAGE
MALE	62	67%
FEMALE	30	33%

**TABLE NO. 2
AGE GROUP OF PATIENTS**

AGE	NO. OF CASES	PERCENTAGE
15 TO 25 YEARS	25	27.3%
25 TO 35 YEARS	37	40.2%
35 TO 45 YEARS	18	19.5%
45 TO 60 YEARS	12	13%

**TABLE NO. 3
TOTAL HOSPITAL STAY**

NO. OF DAYS	GROUP-A EARLY APPENDICECTOMY	GROUP-B CONSERVATIVE+INTERVAL APPENDICECTOMY
2-5 DAYS	18(39%)	0(0%)
6-10 DAYS	22(47.8%)	12(26%)
10-20 DAYS	4(8.6%)	31(67.3%)
> 20 DAYS	2(4.3%)	3(6.5%)

**TABLE NO.4
POST OPERATIVE COMPLICATIONS**

COMPLICATIONS	GROUP-A	GROUP-B
WOUND INFECTION	5(10.8%)	2(4.3%)
RESIDUAL ABSCESS	2(4.3%)	0(0%)
FAECAL FISTULA	2(4.3%)	3(6.5%)
CHEST COMPLICATIONS	3(6.5%)	1(2.1%)
ADHESIVE INTESTINAL OBSTRUCTION	2(4.3%)	1(2.1%)
TOTAL	14(30.3%)	7(15.2%)

DISCUSSION

The treatment of appendicular mass is taking a turn from the traditional approach of initial conservative treatment followed by interval appendectomy to immediate appendectomy. However this change is not widely accepted and a large number of surgeons still continue

to adopt the same traditional conservative approach⁸. They argue that many of these patients responding well to conservative treatment don't require interval appendectomy at all as recurrence rate is reported to be as low as 5-20% (Tekin A 2008, Adala SA 1996)⁹ and importantly the recurrent disease is milder than the primary acute

appendicitis (Dixon MR 2003)¹⁰. The effectiveness of the immediate conservative therapy is a proven and acceptable mode of treating the mass but the need of interval appendectomy is questioned and it may not be cost effective (Hung-Wen Lai 2005)¹¹. But it carries poor patient compliance, a requirement for re-admission, and sometimes difficulty in finding the appendix at the interval appendectomy or undue bleeding (Malik et al 2008). It is also reported that about 10% of patients need exploration due to deterioration on a conservative regimen (Olika D 2000)¹². The patients frequently do not attend for an interval appendectomy if they have been pain free and asymptomatic. The early surgical intervention is known to be an effective alternate to conservative therapy for a long time as it considerably reduces the total hospital stay and obviates the need for a second admission¹³. This reduces the total expenses substantially. The conservative treatment comprises hospitalization, intravenous fluids, antibiotics, analgesics and a strict watch on the vitals and general state of the patient. Another disadvantage of the conservative management is the chance of mis-diagnosis as reported by Garg P, et al claiming that conditions like intussusception and carcinoma caecum may be treated conservatively by mistake adding considerable morbidity¹⁴. The early operation on the other hand has an edge of being curative and ensures early return to work and higher compliance. It is obvious that a true controversy exists as to the best approach towards this problem and the opinion is divided about the management of appendicular mass. Our study highlights the feasibility and effectiveness of early appendectomy in appendicular mass and the results are consistent with a number of similar studies claiming early appendectomy to be a more

appropriate and effective way of managing appendicular mass¹⁵. Advantages of early appendectomy include a total curative treatment, shorter hospital stay, minimal morbidity, and patient compliance^{16,17}. The earlier belief that surgery is difficult in such a state where the inflamed appendix is buried deeply in the mass and the bowel loops are friable is no more a valid argument at present due to a global improvement in anaesthesia, supportive care and antibiotics. The operative problems such as localization of appendix, adhesionolysis and bleeding are more pronounced and troublesome with interval appendectomy as shown in findings of this study. Wound infection, however, remains a common postoperative complication of early appendectomy in appendicular mass but the rate of wound infection is not so high as to preclude this early operative approach. The benefits of early appendectomy outweigh the results of interval appendectomy as evident from our results and also supported by many other studies referred to in comparison to our finding.

CONCLUSION

The traditional and orthodox policy of conservative management of an appendicular mass is a well known and respected entity. The patient is put on Ochsner Sherren Regime and stays in the hospital for 7 to 10 days. Now with the availability of better anesthesia services, 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, and shortens the sickness period and hospital stay with reasonably satisfactory outcome. Though, the last word is yet to be said and needs further studies in larger groups.

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