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RESEARCH ARTICLE

PROSPECTIVE EVALUATION OF CONSERVATIVE VERSUS EARLY SURGICAL MANAGEMENT OF APPENDICEAL MASS

Angkhong Rongmei, P., *Gojen Singh, Kh., Lokesh, S., Nityanand Verma, Lalruatliana Pachuau, Ashwin, M., Teiboklang Wann and Lekhachandra Sharma, K.

Department of General Surgery, RIMS, Imphal, India

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Corresponding author:* **Gojen Singh,

ABSTRACT

Vermiform appendix is considered to be a vestigial organ its importance in surgery results inflammation known as acute appendicitis. If appendix mass is present, standard treatment is the conservative Oschner Sherren regime. However it is based on the inflammatory process already formed and difficult to find the appendix and faecal fistula may form. But some cases may require surgical management if the clinical condition of the patient detoriates. This study is used to compare the conservative management versus early surgical management of appendiceal mass. The study was a prospective study conducted among 50 patients of appendiceal mass admitted in Department of General Surgery, RIMS during the period of September 2008 to March 2010 approval from institutional ethical committee and informed consent was taken. Data were entered in IBM SPSS and check for correlation before analysis. Analysis was done using Chi square test and ANOVAs. This study shows that higher hospital stay was noted in conservative group but the cost of treatment was same in both groups. Paralytic ileus and wound infection were common in early appendicectomy group. Thus, conservative management is a better management for a presenting with appendiceal mass.

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INTRODUCTION

Appendiceal mass is a common surgical entity encountered in 2-6% of patients presented with acute appendicitis and present as a palpable mass in the right lower quadrant. It forms a spectrum of disease ranging from an inflamed appendix, wall of momentum and oedematous portion of the caecal wall and terminal ileum, to a large collection of pus surrounded by adherent and inflamed omentum (appendiceal abscess). The management of appendiceal mass remains controversial with three general approaches. However these depend on the surgeons experience and prevalence in dealing such cases. If an appendix mass is present and the condition of the patient is satisfactory, the standard treatment is the conservative Ochsner shewn regime. This strategy is based on the premise that the inflammatory process is already localized and that the in advertent surgery is difficult and may be dangerous. It may be impossible to find the appendix occasionally a faecal fistula may form. For these reasons, it is wise to observe a non-operative management but clinical conditions detoriates operation should be done (Deakin and Ahmed, 2007). Most of them prefer conservative management which includes bed rest, nil per oral, IV fluids supplementation and IV antibiotics till the inflammatory mass resolves. Then patient is planned for interval appendicectomy following the resolution of symptoms. The incidence of misdiagnosing an appendiceal mass varies between 0-10%. The only indication of interval appendicectomy is to exclude an alternative diagnosis after successful conservative management and if the patient is unwilling to take the low risk of recurrence (Emmanuael *et al.,* 2007). Advantages of interval appendicectomy are avoiding the recurrence of symptoms and misdiagnosis of appendiceal mass. They suggest interval appendicectomy is less hazardous and challenging operation compared with immediate appendicectomy during initial admission. Most recently, the need of interval appendicectomy has been questioned, a number of authors suggest an entirely conservative management without interval appendicectomy. The aim of this approach was to achieve the resolution of the mass and symptoms of the patient. Complications of interval appendicectomy include sepsis, perforation, small bowel ileus and wound infection. Incidence of recurrence of symptoms following successful management is low. When causes for the appendicular mass other than appendicitis are excluded, interval appendicectomy seems unnecessary in patients who respond well to the initial conservative management (Willemsen *et al.,* 2009; Irfan *et al.,* 2002). Advocates of entirely conservative management claim appendicectomy

whether interval or early is unnecessarily. A third option involves performing early appendicectomy prior to the resolution of mass describes the advantage for re -admission and exclusion of other pathologies masquerading as appendicular mass. Vakil I C reported that 34 consecutive patients with appendicular mass underwent earlier appendicectomy within 32 hrs of admission (Jan 1972- March 1974) there was not much of mortality or morbidity and except local wound problems in 6 patients and discharge of pus from drain site in 4 patients. Advocates of early appendicectomy describe the advantage of avoiding the need for readmission, less time consuming, early return to work and lower cost of treatment (Vakili *et al.,* 1976; Muhamad *et al.,* 2002). The present study will be conducted to evaluate and compare the results of conservative treatment including ultrasound guided aspiration and early surgical management of appendiceal mass in the Department of General Surgery, RIMS, Imphal.

Aims and objects

1. To study the various modes of clinical presentation of appendiceal mass
2. To compare the outcome of different methods of management of appendiceal mass
3. To assess the intraoperative and post-operative outcomes and its complication
4. To determine the best option in the management of appendiceal mass

MATERIALS AND METHODS

Study Design: Prospective study

Study Setup: Study was conducted in the Department of General Surgery, RIMS, Imphal

Study Duration: the study was conducted for a period of 1 year 6 months from September 2008 to March 2010

Study Population: patients admitted with appendiceal mass from the OPD, emergency department to the surgical ward, RIMS, Imphal were included in the study.

Inclusion Criteria: All the patients admitted with appendicular mass.

Exclusion Criteria: patients who were not willing to give consent for examination and treatment

Sample size

Group A: ultra sound guided aspiration of appendicular abscess and interval appendicectomy which includes 25 patients.

Group B: Treated by early surgical intervention this includes 25 patients

So, 50 patients were taken for this study.

Variables: variables recorded were surgical management of appendicular mass, intraoperative complications, time taken for surgery, with or without drainage, post operative systemic or local complications.

Procedure: A total of 50 cases of appendicular mass fulfilling the inclusion criteria were studied and recorded in the prescribed proforma. Prior written consent from the patients in case of adults and parents or guardians in case of minor was taken.

METHODS

1. A detail history of patients was taken and detail physical examination was undertaken.
2. All necessary blood investigations like complete hemogram, blood sugar, KFT, LFT, CRP and urine routine was taken
3. Imaging like X-ray abdomen and ultrasound abdomen was done.
4. Then patients was randomly was divided in group A and group B.

Statistics: Statistical analysis was carried out using SPSS software. Data were described using mean and percentage. Analysis was done using Fischer extract test.

Ethical issue: The study was carried out only after obtaining approval from the Institutional Ethics Committee (IEC), RIMS, Imphal. Written informed consent was taken from all the patients. Confidentiality and privacy of the patients was maintained.

RESULTS AND OBSERVATION

The study was conducted among the 50 cases of appendicular mass admitted in RIMS, hospital during the period of September 2008 to March 2010. There were two groups viz. Group A comprised of 25 patients (9 males and 16 females) were treated conservatively. Group B comprised of 25 patients (11 males and 14 females) with early surgical intervention.

Table 1. Age and Sex distribution of the patients

Age (years)	Male	Female	Total	%
<15	3	3	6	12
15-30	9	11	20	40
31-45	6	10	16	32
46-60	1	5	6	12
>60	1	1	2	4
Total	20	30	50	100

There were 60% of female and remaining 40% were male. Maximum number of patients belongs to the age of 15 – 30 yrs. The youngest was 11 years and oldest was 70 yrs. The average age of females were 32.5 yrs and male were 28.3 yrs.

Table 2. Presenting symptoms of both groups

Symptoms	Number	%
Pain in the umbilical area and upper abdomen	50	100
Shifting pain	48	96
Anorexia	42	84
Nausea and vomiting	21	42
Fever	7	14

Table 3. Presenting signs of both groups

Signs	Number	%
Tenderness in right iliac fossa	50	100
Lump in right iliac fossa	50	100
Rebound tenderness	50	100
Rovsing's sign	28	56
Cope's obturator test	14	28
Psoas test	4	8

From Table 2 and table 3 it may be observed that pain in the umbilical area was the most common symptom in all 50 cases (100%). Next to it was shifting pain (96% of cases), anorexia in 84% of cases and nausea vomiting in 42% cases. Tenderness in the Mc Burney's point, rebound tenderness and lump was seen in all patients (100%).

Table 4. Duration of symptoms prior to admission

Duration (days)	Number	%
2-3	40	80
≥4	10	20
Total	50	100

Most of the patients in the both groups were admitted within 2-3 days of onset of symptoms.

Table 5. Duration of symptoms prior to operation (Group B)

Duration (days)	Number	%
2-3	24	96
≥4	1	4
total	25	100

Highest percentage of patients (96%) were operated within 2 to 3 days of symptoms

Table 6. Comparative evaluation between both groups

Features	Group A (n =10)	Group B (n=25)
Male : Female	9:16	11:14
Age (years)	32	28
Peri appendiceal abscess)	2	24
Adhesions	8	25
Wound infection	Nil	3
Total hospital stay (days)	7.5	4.1

Table 7. Operative findings

Condition of appendix	Group A	%	Group B	%
Periappendiceal collection	1	10	24	96
Fecolith	Nil	0	2	8
Inflamed	0	0	25	100
Perforation	Nil	0	1	4
Gangrene	Nil	0	1	4
Lump	1	10	25	100
Adhesion	8	80	25	100

Table 8. Duration of operation

Duration (mins)	Group A	%	Group B	%
20-25	1	10	1	4
25-30	1	10	2	8
30-35	2	20	5	20
35-40	2	20	7	28
>40	4	40	10	40
Total	10	100	25	100

Table 9. Post operative complications

Complications	Group A	%	Group B	%
Paralytic ileus	Nil	0	1	4
peritonitis	Nil	0	Nil	0
Wound infection	1	10	4	16
Intestinal obstruction	Nil	0	Nil	0
Faecal fistula	Nil	0	Nil	0
Residual abscess	Nil	0	2	8
Total	1	10	7	28

Mean age in Group A was 32 years and 28 in Group B during operation 2 patients from group A and 24 patients from group B had peri appendiceal abscess. 8 patients in group A and 25 patients in group B had adhesions. No wound infection were found in group A and 3 in group B. Mean hospital stay in group A was 7.5days and 4.1 days in group B.

Table 10. Histopathological findings

HPE report	Group A	Group B
Acute appendicitis	0	25
Fibrosis and obliteration of lumen	1	0
Chronic inflammation	4	0
Carcinoid tumour	0	0
Appendix with patent lumen	7	19
Granulomatous appendicitis	0	0
Normal appendix	9	0
Obliterated and fibrosed appendix	2	0

DISCUSSION

An appendiceal mass is a result of appendicitis consists of inflamed appendix, oedema, adherent omentum and intestinal segment and it develops in 2-6% of cases following acute appendicitis. Conversely, appendiceal abscess is a localized suppurative process in this region that many develop at any time during the attack of appendicitis or during resolution of the appendiceal mass. Reports on conservative versus early operative treatment of appendiceal mass and abscess are difficult to compare, certainly no single prospective and randomized trail has been carried out to clarify the possible superiority of any of these treatment plans. One main problem in comparing existing retrospective results is the lack of consistency in using terms appendiceal mass and appendiceal abscess. During the last century, the treatment of an appendiceal mass has been changed several times. Early in the 20^{th} century, it was considered a good practice to hospitalize the patient and keep them in bed until the mass was resolved itself spontaneously. In the 1990, treatment of appendiceal mass initial conservative treatment and reserved interval appendectomy only for the symptomatic patients. The benefit of interval appendectomy has been questioned in several studies. The argument is that therapeutic gain (avoidance of recurrences, identification of malignant and potentially malignant lesions) is minimal (about 10%). However, there is a wide variation in the rate of recurrent appendicitis after an attack of appendiceal abscess. Generally quite many recurrences take place within the first months of the convalescence, and cannot be prevented unless interval appendectomy before elective appendectomy in a few weeks.

The present study has been undertaken as a prospective clinical study to compare the traditional conservative treatment including ultrasound guided aspiration of appendiceal abscess and interval appendectomy (Group A) with early surgical management (Group B). The study is based on 50 cases of appendiceal mass treated by two modalities, by simple randomization technique. Twenty five patients each were allocated to both the groups. The results of several clinical trials conducted at different centres using different modes of treatment of appendiceal mass are also available. This chapter aims at comparing the clinical findings of the present series of patients, the response to treatment and the complications encountered with the already published datas.

REFERENCES

Deakin DE, Ahmed I. 2007. Interval appendectomy after resolution of Acute inflammatory appendix mass: Is it necessary; Surgeon, 5(1):45-50.

Emmanuael BO, Glinka M, Kalemba J. 2007. Management of appendiceal mass in children and adults: Our Experience. *J Surg.,* 9(2).

Irfan K, Zekai A, Aytac K, Gunyuz T, Erol, 2002. The management of appendiceal mass in children: Is interval appendectomy necessary. *J Surg. Pak.,* 11(2):52-6.

Muhamad HT, Soab AQ. 2002. Early surgical management of appendiceal mass. *J Surg. Pak.,* 11(2):52-6.

Vakili C. 1976. Operative management of appendiceal mass. *Am J Surg.,* 131(3):312-4

Willemsen PJ, Hoorntje LE, Eddes EH, Ploeg RJ. 2002. The need of interval appendectomy after resolution of an appendiceal mass questioned. *Dig Surg.,* 29(3):216-20.

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