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A prospective Comparative study of Interval Appendicectomy vs Conservative Management With follow up in appendiceal mass in GRH Madurai.

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I. Introduction

Acute appendicitis is that most common surgical emergency which may be complicated by development of an appendiceal mass. That appendiceal mass is formed around that perforated appendix & it consists of inflammatory mass of inflamed appendix, adjacent viscera & greater omentum. An appendiceal mass varies from phlegmon to abscess & it develops in 2% to 6% of cases following acute appendicitis . Appendiceal mass more commonly seen in elderly males . For decades it have been conflicting opinions in that appendiceal mass management. Three modes of management practised now are (1) immediate appendectomy before that resolution of that mass , (2) conservative management with interval appendectomy in 6to 8 weeks . (3) An entirely conservative approach without interval appendectomy with regular follow up Conservative management for appendicular mass initially as described by Oschner has so far been followed routinely by surgeons worldwide. Oschner-Sherren regime includes hospitalisation, bowel rest, broad spectrum antibiotics, hydration & percutaneous drainage of abscess until that mass gets resolved. Traditionally following conservative management of appendicular mass interval appendectomy (6-8weeks later) is done. Surgeons suggesting interval appendicectomy claim that recurrence of appendicitis is more common & by doing interval appendicectomy that underlying pathology like crohn's disease, mucocele or malignancy can be dealt with in time.

That need for interval appendicectomy after successful conservative treatment has recently been questioned & increasing number of studies on this aspect are pouring in. That advocates of conservative management alone with prolonged follow up without interval appendectomy, substantiate that rate of recurrent appendicitis is low (6-20%) & point out that even that potential recurrences have mild clinical course. More over complications include wound & intra-abdominal sepsis, adhesive small bowel obstruction.

Immediate appendectomy following resolution of mass may look like easily feasible, safe, cost effective allowing early diagnosis & treatment of unexpected pathology. However it has higher complication rate 36% leading to dissemination of infection, intestinal fistula formation with misdiagnosed of cancer may end up in right hemicolectomy. Sometimes a malignant mass may be mistakenly under treated by appendicectomy. Because of thatse complication this method is not practiced nowadays unless there is no response to conservative treatment.

Hence I have restricted our study in that management of appendiceal mass to Prospective comparative study on conservative management followed by interval appendectomy against conservative management alone with regular follow up.

OBJECTIVES

That objectives of that study were-

1. To study that outcome of appendicular mass patients on conservative management followed by interval appendectomy against conservative management alone with regular follow up..
2. To evaluate that risks of interval appendicectomy.

II. Materials & Methods

That study was conducted in that Department of General Surgery, Govt.Rajaji Hospital & Medical College, Madurai during that period of August 2017 to August 2018.

STUDY DESIGN
A prospective non randomised study.

SOURCE
That present study was conducted in that Department of Surgery, Govt.Rajaji Hospital & Medical College, Madurai

STUDY PERIOD
One year from to . August 2017 to August 2018.

SOURCE OF DATA
Patients admitted with clinical diagnosis of appendicular mass under that Department of Surgery, Govt.Rajaji Hospital & Medical College, Madurai during that study period.

SAMPLE SIZE.
A total of 50 patients with clinical diagnosis of appendicular mass were studied.

SELECTION CRITERIA.
Inclusion criteria
1. All patients with clinical findings & investigation report in favour of appendiceal mass were included
2. All age group from 13 to 70 years
3. Both male & female patient were included.

Exclusion criteria.
- Patients less than 13 years of age & more than 70 years of age.
- Patients with generalised peritonitis were excluded..
- Non cooperative patients for regular follow up..
- Patients with comorbidities like diabetes mellitus, end stage liver disease,immunocompromised state.

PROCEDURE
Ethical clearance has been obtained from "Ethical Clearance Committee" of that institution for that study. Based on that selection criteria patients admitted with diagnosis of appendicular mass patients under Department of Surgery,
Govt.Rajaji Hospital & medical college,Madurai during that study period weres creened. That nature of that study was explained to that patients. That patients were included in this study after getting written informed consent. History & clinical examination was done for all & recorded in that profoma.
That following tests were carried out on admission.
Routine blood investigations (Complete blood count, platelet count, reticulocyte count).
serum electrolytes .

Blood sugar ,
serum urea & creatinine
Serum Bilirubin (Total & Direct bilirubin). Liver Function Tests
XRAY CHEST
ECG
USG ABDOMEN & PELVIS
CECT ABDOMEN & PELVIS
Seropositivity for HbsAg,
VCTC

Urine analysis (routine & microscopy).

Initially all were treated conservatively as described by Oschner & Sherren regimen.

After successful management of appendiceal mass patients, In group I patients were advised to come periodically for review or as soon as any recurrence of symptoms appear. Patients with recurrence were admitted and appendectomy done either by open or laparoscopic procedure. Patients who did not turn up for review were closely followed up by telephonic conversation and their complaints if any present were recorded.

Group I patients were advised to come for interval appendectomy in 6 to 8 weeks. On their readmission they were performed appendectomy either by
open or laparoscopic procedure. All were followed up for minimum 6 months for any complication and to assess prognosis.
In group II patients were advised to come periodically for review or as soon as any recurrence of symptoms appear. Patients with recurrence were admitted and appendectomy done either by open or laparoscopic procedure.

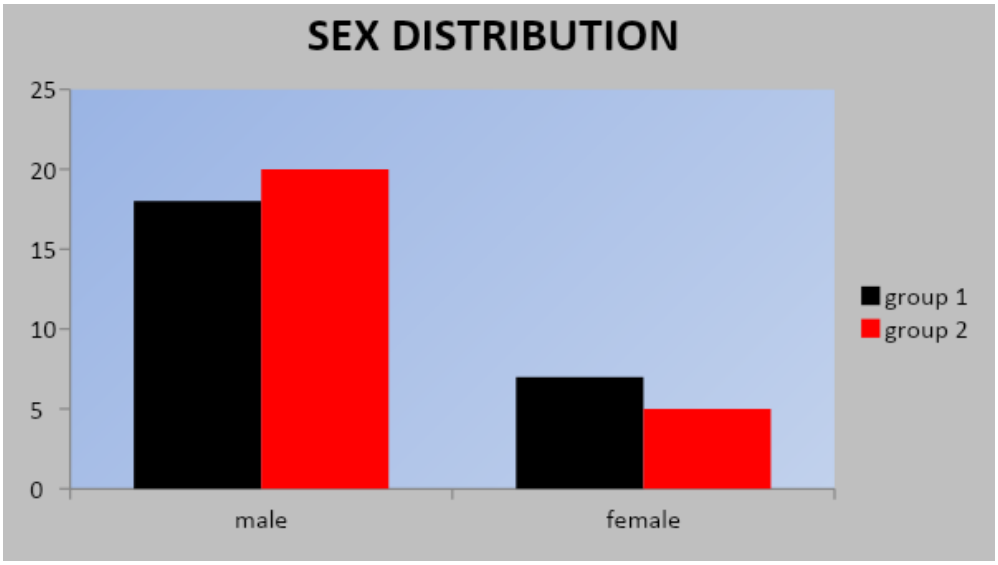
III. Results

Outcome of our study are shown in the tables attached. The age and sex distribution in each group are as follows.

GROUP 1 – CONSERVATIVE MANAGEMENT , GROUP 2- INTERVAL APPENDICECTOMY

1. AGE DISTRIBUTION:

Age	GROUP 1(CONSERVATIVE MANAGEMENT)	GROUP 2 (INTERVAL APPENDICECTOMY)	% total
13 to 25	5	4	18%
26 to 50	18	19	74%
51 to 70	2	2	8%

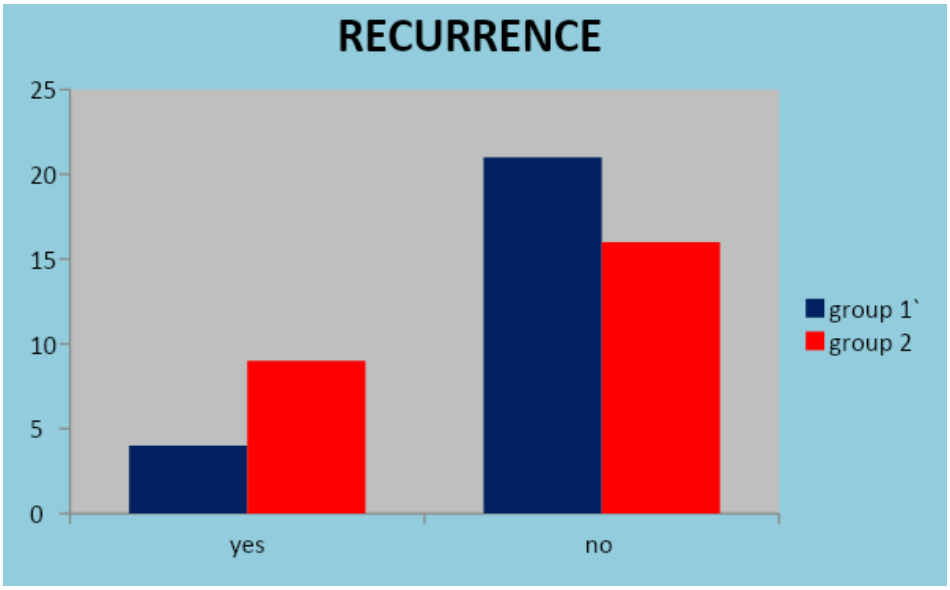


Age	Group		Total
	Group 1 Conservative	Group 2 Interval appendicectomy)	
13 to 25	5	4	9
26 to 50	18	19	37
51 to 70	2	2	4
Total	25	25	
P VALUE		0.834 NOT SIGNIFICANT	

The mean age group was similar in both groups (26 T0 50 yrs). There was no statistical significance .

2. **SEX DISTRIBUTION.**

SEX	GROUP 1 (conservative)	GROUP 2 Interval appendicectomy	% TOTAL
MALE	18	20	76%
FEMALE	7	5	24%

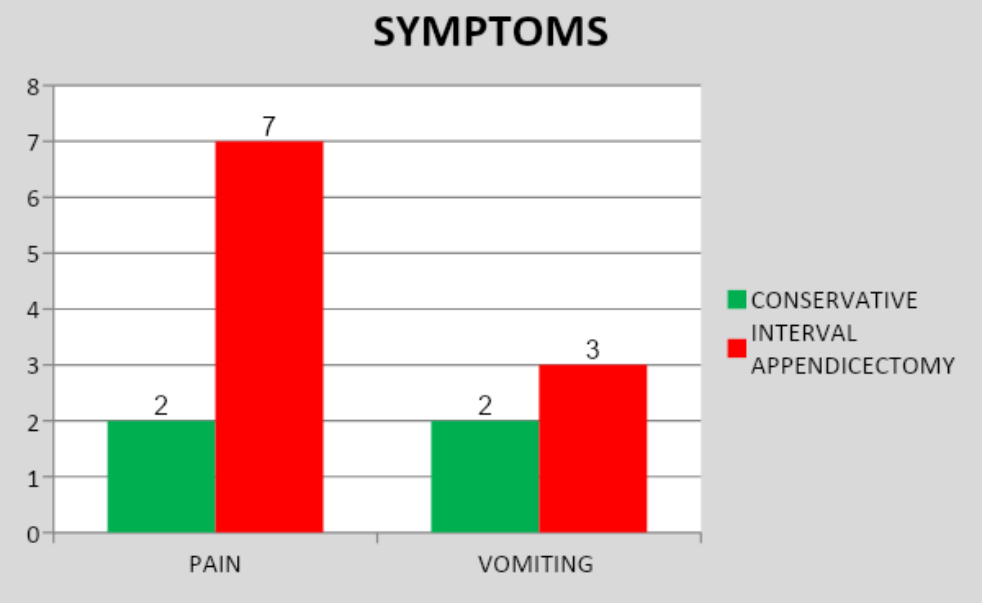


In the CONSERVATIVELY MANAGED group among 25 patients 18 were male 7 were female . In INTERVAL APPENDICECTOMY group 20 were male patients and 5 were females . There was no statistical significance among sex in both groups . MALES were affected more than females .

3. RECURRENCE

Recurrence	GROUP 1 conservative	GROUP 2 Interval appendicectomy
yes	4	9
no	21	16
Total	25	25

	GROUP 1	GROUP II
Recurrence	4	9
Total	25	25
proportion	0.16	0.36



In the CONSERVATIVELY MANAGED group among 25 patients 4 patients got recurrent appendicitis. In INTERVAL APPENDICECTOMY group 9 patients got recurrent appendicitis. There was no statistical significance among sex in both groups . MALES were affected more than females .

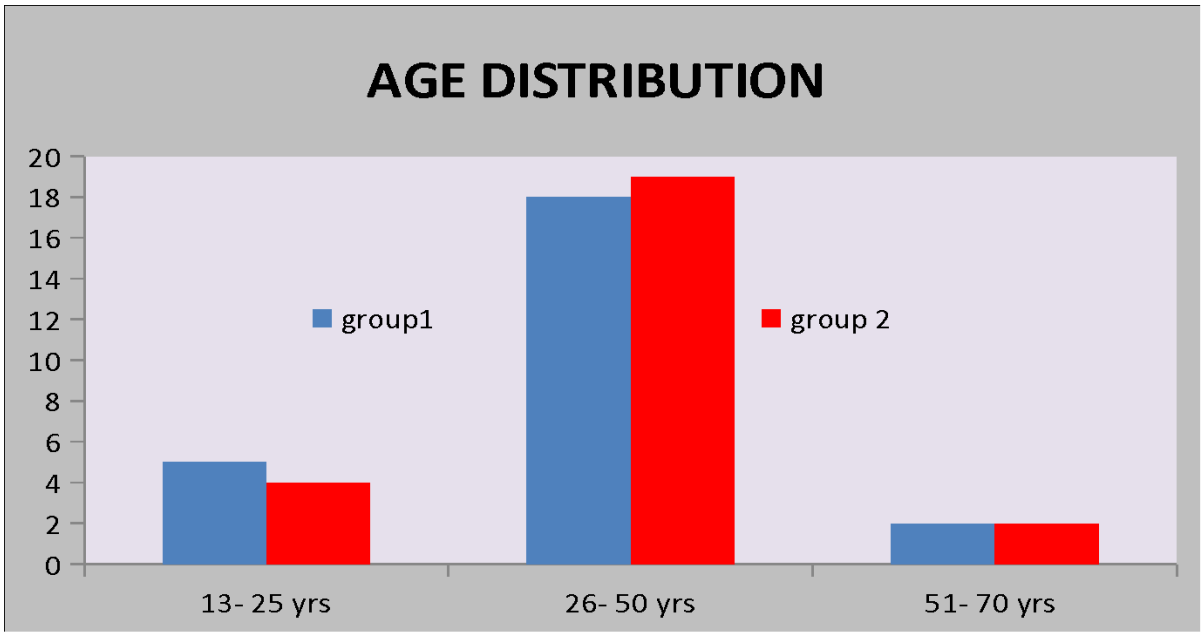
4. SYMPTOMATOLOGY

Symptoms	Group 1 (Conservative)	Group 2 (Interval appendicectomy)
Pain	**2**	**7**
Vomiting	**2**	**3**
Total	**4**	**10**

In the CONSERVATIVELY MANAGED group among 25 patients 4 patients developed symptoms of appendicitis . In INTERVAL APPENDICECTOMY group 10 patients developed symptoms of appendicitis.

5.COMPLICATIONS

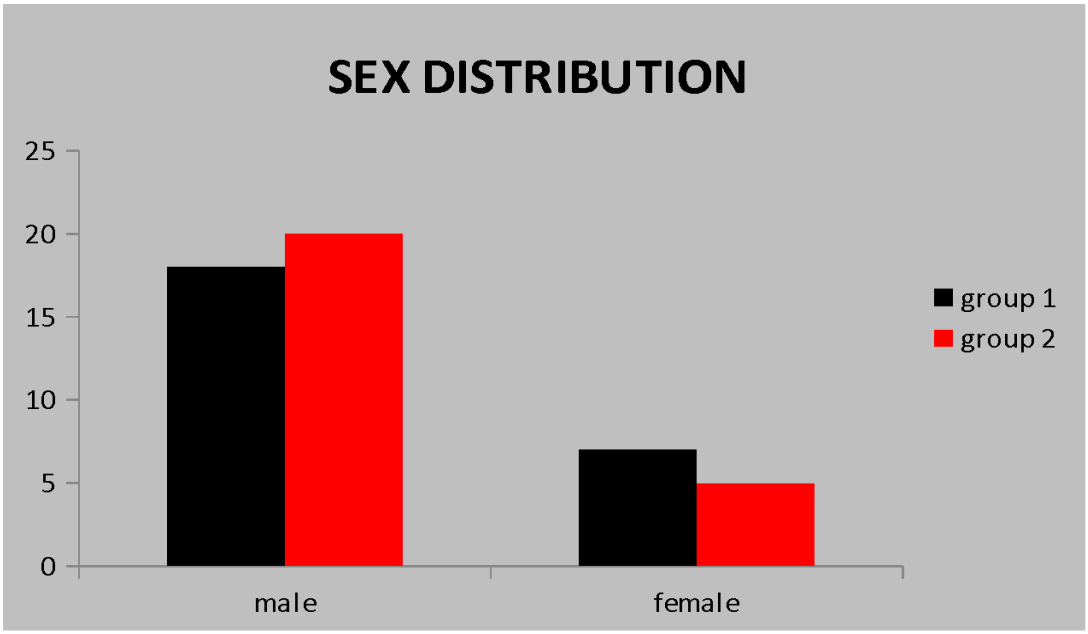
COMPLICATIONS	Group I	%	Group II	%
ADHESIVE OBSTRUCTION	**2**	**8%**	**7**	**28%**
EC FISTULA	**0**	**Nil**	**2**	**8%**
TOTAL	**2**	**8%**	**9**	**36%**



In the CONSERVATIVELY MANAGED group among 25 patients 2 patients developed complications . In INTERVAL APPENDICECTOMY group 9 patients developed complications

6.DURATION OF HOSPITAL STAY

Duration of hospital stay	Group 1 (Conservative)	Group 2 (Interval appendicectomy)
Less than 5 days	**22**	**9**
5 to 10 days	**3**	**13**
>10 days	**0**	**3**
MEAN	**3.409091**	**5.22222**
P VALUE	**0.00001 SIGNIFICANT**	



In the CONSERVATIVELY MANAGED group among 25 patients, patients stayed in hospital Less than 5 days -22 patients, 5 to 10 days 3 patients . In INTERVAL APPENDICECTOMY group patients stayed in hospital Less than 5 days -9 patients, 5 to 10 days 13 patients , more than 10 days 3 patients. P value was significant . It was stasiticaly significant.

IV. Discussion

Early appendicectomy is the treatment of choice in acute appendicitis. Once mass has formed the line of management is controversial subject. Current study mostly favours conservative management for appendiceal mass. Following conservative management to go for interval appendectomy in 6 to 8 wks period or conservative management alone with regular follow up is still a debatable question.

Following conservative management the intension for doing interval appendectomy is mainly to avoid recurrence. The prospective study done by Youssuf *et. al.* revealed that interval appendectomy done at 6 and 12 weeks had prevented 10.6% and 6.7% of recurrent appendicitis respectively. that means that in 89.4% and 93.3% the interval appendectomy done was unnecessary. In literature the reported rate of recurrence after conservative management alone was 6.2% which was more common during the first six months. The one year recurrence rate was low. (1.9—2.2%) . In another random perspective study conducted by Kumar and Jain the recurrence was only 10% where conservative management with regular follow up alone was done [30].

. Based on these observations doing routine interval appendectomy is not mandatory to prevent recurrent appendicitis since the results clearly show the recurrence rate is considerably less to go for interval appendectomy straightaway. Moreover recurrence after conservative management has mild clinical course and surgical treatment has little complications.

Another important point to study is the complications related to conservative management with interval appendectomy and conservative management only with regular follow up. In a series of studies the complications following interval appendectomy was 12% to 23% [11,14, 27 ,31] which included sepsis, bowel perforation, ileus, fistulas and adhesive obstruction . The relative occurrence was equal to the complications occurring while doing immediate appendectomy for appendiceal mass .

- In our study the mean age group of surgery in both groups was 26 to 50 years with majority of the cases being males compared to females .
- Recurrent appendicitis is more common in interval appendicectomy group.
- In group II among 25 patients , 10 patients developed symptoms of appendicitis .

The incidence of complications include adhesive obstruction 2 (8%)in group I . In group II the main complications like obstruction 7(28%) , EC Fistula 2 (8%) . It clearly shows since the morbidity is more (36%) after interval appendectomy it is better to go for conservative management with regular
follow up and plan for surgery if recurrence occurs. Among two groups , group II patients has long duration of hospital stay than group 1 patient.

V. Conclusion

Recent studies in literature are mostly not in favour of routine interval appendectomy following conservative management of appendiceal mass. Based on the results of our study recurrence rate in both interval appendicectomy group and conservative management alone group are comparatively less and the COMPLICATION RATE, DURATION OF HOSPITAL STAY more in the interval appendicectomy group, we conclude it is better to go for conservative management with regular follow up and intervene only when recurrence occur in case of appendiceal mass

Bibliography

[1]. Ref - Sabiston text book of surgery 19 th edition
[2]. Srb manual of surgery 5th edition
[3]. Schwartz text book of surgery.
[4]. Guller U, Hervey S, Purves H, et al: Laparoscopic versus open appendectomy: Outcomes comparison based on a large administrative database.Ann Surg 239:43–52, 2004
[5]. McGory ML, Maggard MA, Kang H, et al: Malignancies of the appendix: Beyond case series reports. Dis Colon Rectum 48:2264–2271, 2005.
[6]. Weltman DI, Yu J, Krumenacker J, Jr, et al: Diagnosis of acute appendicitis: Comparison of 5- and 10-mm CT sections in the same patient. Radiology 216:172–177, 2000.
[7]. Anderson SW, Soto JA, Lucey BC, et al: Abdominal 64-MDCT for suspected appendicitis: The use of oral and IV contrast material versus IV contrast material only. AJR Am J Roentgenol 193:1282–1288, 2009.
[8]. Hawkins JD, Thirlby RC: The accuracy and role of cross-sectional imaging in the diagnosis of acute appendicitis. Adv Surg 43:13
[9]. Willemsen PJ, Hoorntje LE, Eddes EH, Ploeg RJ. The need for interval appendectomy after resolution of an appendiceal mass questioned. Dig Surg. 2002; 19: 216–220; discussion 221. [PubMed]
[10]. Arnbjornsson E. Management of appendiceal abscess. Curr Surg. 1984; 41: 4– [PubMed]
[11]. Nitecki S, Assalia A, Schein M. Contemporary management of the appendiceal mass. Br J Surg. 1993; 80: 18–20. [PubMed]
[12]. Bagi P, Dueholm S. Nonoperative management of the ultrasonically evaluated appendiceal mass.Surgery. 1987;101:602-605.
[13]. Norman S William, Christopher JK et.al Vermiform Appendix in short practice of Surgery 25th Ed. London. Edward Arnold publisher Ltd. 2008 1205-1217.

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