



APPENDICULAR MASS- OUR EXPERIENCE IN TERTIARY CARE HOSPITAL, ANDHRA PRADESH, INDIA.

Surgery

Dr Soumya Sree Nanduri*

Post Graduate Department Of General Surgery Alluri Sitaramaraju Academy Of Medical Sciences Eluru 524005, Eluru District Andhra Pradesh, India *Corresponding Author

Dr. V. Rambabu

Professor Department Of General Surgery Alluri Sitaramaraju Academy Of Medical Sciences Eluru 524005, Eluru District Andhra Pradesh, India

Dr N V Pradeep

Assistant Professor Alluri Sitaramaraju Academy Of Medical Sciences Eluru 524005, Eluru District Andhra Pradesh, India

ABSTRACT

Aim: Appendicular mass is a well-known complication of acute appendicitis. It is conventionally treated conservatively followed by interval appendectomy. This prospective clinical study was done to evaluate the various ways of presentation, etiological evaluation and management of appendicular mass. **Methods:** A prospective, nonrandomized study was conducted over a 1 year period evaluating 106 cases of appendicular masses. All cases evaluated from their first appearance in emergency department till the end of appropriate treatment. They were subjected to early resuscitation, laboratory evaluation and imaging of condition with ultrasound abdomen. **Results:** Among the cases of 106; 17 were diagnosed as abscess for which emergency drainage was done. 68 cases were managed by conservative management followed by interval appendectomy. Non resolving appendicular masses were evaluated for tuberculosis or malignancy by CECT abdomen, colonoscopy. Among these non resolving masses, 11 were diagnosed to have tuberculosis of ileocecal junction leading to appendicular mass diagnosed to have adenocarcinoma of cecum and appendix. We noticed only one case of carcinoid tumor which belonging to non resolved group. Mortality is zero. **Conclusions:** Appendicular mass, one of the commonest presentations of various etiologies that affect ileo cecal junction. Because of endemicity of tuberculosis and risk of malignancy in certain age groups, these should be kept in mind while evaluating these patients.

KEYWORDS

Appendicular Mass, conservative management, interval appendectomy, tuberculosis of ileocecal junction.

INTRODUCTION-

Acute appendicitis i.e. acute inflammation of the appendix from mild inflammation of mucous membrane to gangrene, perforation and peritonitis is the most common acute surgical condition (1,2,3). Regardless of the cause it is associated with definite morbidity and mortality if not managed properly. These complications are more at the extremes of age and in immunocompromised patients (3, 4). The definite treatment of acute appendicitis is appendectomy to avoid complications (4).

If timely appendectomy is not done due to any reason 2-6% of the patients develop a mass as one of the early complications (4). On the third day (rarely sooner) of commencement of acute appendicitis, a tender mass can frequently be felt in right iliac fossa. This mass is composed of omentum, edematous caecal wall and edematous loop of ileum. The treatment of this appendicular mass is controversial and there are several management options (5).

Traditionally, those patients are managed conservatively followed by interval appendectomy 4 to 6 weeks later, believing that an early appendectomy in these cases is hazardous, time consuming and may lead to life threatening complications such as faecal fistula (6).

Others prefer an operative intervention, including the drainage of the mass and conservative treatment, and later an interval appendectomy depending on the results of colonoscopy or barium enema which could help in excluding other underlying lesions

Aims And Objectives:

The purpose of this study is to highlight the salient causes of appendicular masses and its outcome in terms of morbidity and mortality.

MATERIALS AND METHODS:

This study was conducted at ASRAM, ELURU Andhra Pradesh, during the calendar year 2021-2023 ASRAM is a 1100 bedded tertiary care hospital rendering services to the people of Andhra Pradesh and adjacent districts. The hospital has a 24 hours casualty department, 20-bedded surgical intensive care unit, several open wards with capacity for around 200 surgical patients, and equipped with an emergency operating room (8).

A retrospective study of 106 patients of appendicular mass was done over a period of last two years (NOVEMBER 2022-DECEMBER 2023)

Inclusion criteria: Patients diagnosed to have acute appendicitis which is complicated by appendicular mass diagnosed by clinical examination, abdominal ultrasound examination were included.

Exclusion criteria: Patients with acute appendicitis in its early stages without mass were not included. Other causes of right iliac fossa masses were excluded.

All cases were studied in terms of clinical presentation, radiological evaluation, operative findings and postoperative course. Data was collected from outpatient department, casualty records, emergency operation theatre, postoperative ward records, and death records. Data includes gender, age, date of admission, date of surgery, date of discharge or death, date of onset, and type of symptoms, presence of guarding, rebound tenderness, or rigidity, abdominal quadrant (s) affected, vital signs on presentation including heart rate, blood pressure, and respiratory rate, operative diagnosis, and surgical procedure.

The results of initial complete blood counts, results of abdominal ultrasound, x-ray erect abdomen, biochemical values (creatinine and potassium values) were also taken into consideration. Cases not resolved by initial non operative management were evaluated by CECT abdomen and colonoscopy in view of malignancy and tuberculosis.

RESULTS:

Of the 106 cases that were studied, mean age of presentation was 29.35 years (range from 7 to 89 years) with majority of patients being males 64 (55.88%) and the remaining 42 (47.61%) being females. The male predominance over female in ratio of male/female-1.2:1. Majority of the patients 51/106 were in 21-30 years age group (48.16%) followed by 32/106 (29.36%) in >40 years age group and 23/106 (13.60%) were in age group 10-20 years. (Bar diagram-1).

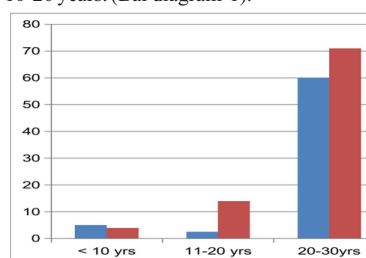


Figure 1: bar diagram I age and sex distribution

Majority of the patients (95/106) presented with classical pain of acute appendicitis, 90 patients with vomiting, fever in 95, abdominal distension in 74 and altered bowel habits in 42, and 10 patients presented with shock due to septicaemia. 8 patients gave past history tuberculosis all are which is treated according principles of RNTCP.

All cases of appendicular mass were initially treated according Oschner Sheeren regimen. The regimen includes regular clinical evaluation of symptoms and vitals, assessment of abdominal lump size. Patient was put on liquid diet and parental broad spectrum antibiotics covering gram negative and anaerobics.

Among the 106 cases, 68 were successfully treated with Oschner Sheeren regimen alone. And all these patients were undergone interval appendectomy after 6 weeks of resolution. The non resolving cases (38/106) were further evaluated with ultrasound and CECT abdomen, colonoscopy in view of tuberculosis and malignancy.

Seventeen cases (17/38) of non resolving cases were diagnosed to have appendicular abscess as a complication of appendicitis. These cases were diagnosed with ultrasound abdomen as a failure of non operative management. All these cases were underwent emergency drainage of abscess followed by interval appendectomy. Emergency appendectomy was not done in these cases because of high chances of postoperative fistula and other complications.

11 cases of appendicular masses which belong to non resolving group were diagnosed to have tuberculosis as aetiology of mass by CECT abdomen and colonoscopy biopsy. All were put on anti tubercular regimen for 6 months under RNTCP guidelines. Five of these cases were known case of Koch etiology and were treated for 9 months under category 2 of RNTCP.

Out of these 10 cases of non resolving group were diagnosed to have malignant pathology on biopsy and imaging. All these were underwent right hemicolectomy.

Postoperative pathology shows 7 were having adenocarcinoma of cecum and 1 case was diagnosed to have carcinoid tumor and 2 were diagnosed to have chronic inflammatory pathology.

Table 1: Outcomes of Appendicular Masses

Outcomes of Treatment	Number of patients
Resolved by Conservative management	68
Unresolved	38
Appendicular Abscess	17
Tubercular Pathology	11
Malignant Pathology	10

DISCUSSION

Acute appendicitis is a very common surgical cause of acute abdomen. With prolongation of duration of symptoms, in some patients, appendicular mass develops. In the present study appendicular mass was found in 11.7% of all cases of acute appendicitis whereas other study conducted in different places the incidence ranges from 2- 6%

The incidence is found to be higher in our study, as reason may be the late presentation of the patients from the areas where emergency medical facilities are not available or may be due to financial problem or ignorance where patients either do not seek medical advice or take the analgesics over the counter.

The maximum patients in this study, i.e. 51 (48.16%) were between the age group of 21 – 30 years, however the age varied from 7 - 89 years suggesting any age group prone to develop mass. The male to female ratio is 1.26:1 which is similar to other studies where male predominance is found.

Majority of the patients who presented with lump had symptoms between 4-10 days. In other studies, it was found to be 3-4 days. Reason might be the patient in our region coming from distant places and habit of getting treatment by local practitioner

During the conservative management, appendicular abscess may develop in few cases. In the present study, appendicular abscess developed in 17 [14.3%] of the patients who were managed with either

ultrasound guided drainage or laparotomy drainage.

In our study, 30 [11.02%] cases returned with repeat attack of acute appendicitis and all of them underwent successful appendectomy. A meta-analysis conducted over a 13 years period, including 1012 patients concluded that the interval appendectomy was not justified, as the majority [95%] of the patients managed conservatively will not develop recurrence. The success rate of initial conservative management varies between 76-97%.

In our study 38 patients (52.22%) out of 68 were successfully treated conservatively. So our success rate of conservative management was 52.22% was not comparable to other studies because of high incidence of tuberculosis in our area. According to the results of our study, most of the patients were managed successfully by conservative approach with only few needing surgery for complications.

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 Oschner Sheeren Regime and stays in the hospital for 7 to 10 days.

All the patients do not respond uniformly. In a significant number of patients, the regimen fails and surgical intervention has to be made rather in a difficult situation. Misdiagnosis in the form of ileocaecal tuberculosis, carcinoma of caecum and intussusceptions is another enigma.

REFERENCES

- Caterino S. Acute abdominal pain in emergency surgery. *Ann-Ital- Chir*, 1997;68 (6):807-1.
- Cushieri A. Small intestine and Vermiform appendix In: Cushieri A, Gillies GR, Moosa AR. *Essential surgical practice*, 3rd edition.
- Mufti Js, Akhtar, Khan K, Raziq F, Rehman Z, Ahmed J. Diagnostic accuracy in acute appendicitis. Comparison between clinical impression and ultrasound findings. *JAMC*, 1996;8(1):13-15.
- Rintoul RF. Operations on the appendix In :Rintoul RF. *Farquharson's Textbook of operative surgery*, 8th edition.
- Arshad Malik, Aziz Laghari A, Qasim Mallah, Altaf Hussain Talpur K. Early appendectomy in appendicular mass at LIAQUAT University hospital experience. *J Ayub Med Coll Abbottabad* 2008.
- Konkena JR, Vayalapalli MR, Podili NK, et al. Spectrum of secondary peritonitis in north coastal Andhra Pradesh, India. *J. Evid. Based Med. Healthc*. 2016; 3(65), 3536-3541. DOI: 10.18410/jebmh/2016/759
- Bernard M, Jeeffe and David H. Berger; The appendix; *Schwartzs Principles of Surgery* 8th Edition 2005; P-1125.
- P. Ronan O'Connell; The Vermiform appendix; *Short practice of surgery* 25th edition 2008; P1204-18.
- Kevin P. Lally; Charles S. Cox; Appendix; *Sabiston Textbook of Surgery* 17th edition 2004; P1389.
- Ahmed; De. U. Ghosh S. Does appendectomy really required after successful conservative treatment of appendicular mass; *The Surgeon* Feb. 2007 vol. 5; no.
- Oliak D, Yamini D, Udani VM, Lewis RJ, Vergas H, Arnell T et al. Non-operative management of perforated appendicitis without periappendiceal mass. *AM- J Surg*, 2000;179:177-81.
- Garg P, Dass BK, Bansal AR, Chitkara N. Comparative evaluation of conservative management versus early surgical intervention in appendicular mass. *J-Indian Med Assoc*, 1997;95(6):179-80
- Dr. Arshad M. Malik; Early appendectomy in appendicular mass; *J. Ayub Medical College Abbottabad*.