

## Interval Appendectomy after resolution of an appendiceal mass- is it really necessary?

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**Abstract:** The necessity of routine interval appendectomy after resolution of appendicular mass is debatable. A study was conducted to evaluate whether surgical factors and pathological features of excised appendices support interval appendectomy.

**(Key words:** Appendiceal mass, Diagnosis, Conservative treatment, interval appendectomy).

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### I. Introduction

2 to 6% of the cases of appendicitis are complicated by the presence of an appendiceal mass at time of diagnosis<sup>(1,2)</sup>. An appendiceal mass is the result of a walled off appendiceal perforation. The diagnostic criteria and the management of this condition have been controversial for more than 100 years. Initially, a non operative approach was advocated because of spread of infection due to early surgical intervention was feared. Later, with improvement of anesthesia, introduction of antibiotics and better supportive care, an immediate appendectomy for all states of appendicitis was recommended. Now days the preferred approach appears to have changed again to an initially conservative non operative treatment, consisting of antibiotics, bed rest and fluids. Oral food intake is restarted and extended when pain and size of the palpable mass decrease, using ultrasound examination and erythrocyte sedimentation rate as methods for follow up of the mass<sup>(2)</sup>. An elective appendectomy is performed in the majority of centres approximately 8 weeks after the acute episode<sup>(3-8)</sup>. During the past years we have followed this approach, however, in recent years more evidence is presented in the literature that this interval appendectomy can be omitted<sup>(1,9)</sup>. On top of this, we found that there was an important number of resected appendices at appendectomy that were diagnosed, in which fibrosed appendicitis or normal appendix could be found. These findings stimulated us to study the incidence and accuracy of diagnosing an appendiceal mass in our Hospital and to question the necessity of interval appendectomy.

### II. Material And Methods

We performed a retrospective study at Mahatma Gandhi Medical College & Hospital, Jaipur. All patients diagnosed with an appendiceal mass in the period January 2005 to January 2013 (8 Years) were identified using Hospital data base. The medical record of all these patients (n = 26, 12 M, 14 F) were reviewed. Presenting symptoms, findings of clinical examination and additional imaging (ultrasound) were registered, as well as the course of primary hospitalization, the interval period, and the interval appendectomy. Results of histological examination of all resected specimens were reviewed.

### III. Results

It was found that all patients presented with mass in RIF and the median temperature was 38<sup>0</sup>c ranging from 36 to 40<sup>0</sup>C, ultrasound examination was done in 80% of patients and showed an appendiceal mass in 80%. During the interval period, 4 patients presented with appendiceal mass, though reduced in size but still persisting at 3 weeks, underwent operation. In two patients Rt. Hemicolectomy was done as they were case of Carcinoma cecum, further 2 patients had acute appendicitis during interval period and required emergency appendectomy.

### IV. Discussion

An appendiceal mass represents a pathological spectrum ranging from pblegmon to abscess caused by a walled off appendiceal perforation<sup>(1)</sup>. During the last century, the treatment of an appendiceal mass has changed several times. Early in the 20<sup>th</sup> century it was considered good practice to hospitalize the patient and keep him in bed until the abscess drained itself spontaneously. In the 1960s surgical drainage was advocated, and it was an easy procedure, the appendix could be removed at the same time. However, this should be postponed if this entailed considerable dissection with the threat of injury to the surrounding structures<sup>(10)</sup>. In the 1990s<sup>(9)</sup> the treatment of an appendiceal mass is described as follows: initial treatment of an appendiceal mass is non operative with antibiotics, bowel rest, IV hydration and early ultrasound or CT scan to visualise the abscess. With this treatment in general symptoms resolve in 7-14 days and interval appendectomy is only done

in symptomatic patients, if there is a peculiar anatomy, predisposing to appendicitis or if there is a persisting mass effect.

The incidence of recurrent appendicitis has been reported as 13.7%. It is generally accepted that the risk is highest in the first year after diagnosis and conservative treatment of an appendiceal mass<sup>(1)</sup>. In our cases only 2 patients needed urgent readmission and operation during the interval period, in which acute appendicitis was found. The risk of recurrent acute appendicitis becomes minimal after 2 years of initial episode<sup>(1)</sup>. Occasionally, other pathologies like carcinoma cecum or appendix, cecal diverticulitis or inflammatory bowel disease are the cause of initial episode of a so called appendiceal mass. It certainly seems appropriate to exclude these conditions in patients who have presented with an appendiceal mass. Colonoscopy, barium enema, small bowel X-rays and CECT scan are the examination for this purpose. However, persistence of mass at 3 weeks is suspicious, as 4 of our cases had same and operated and 2 out of 4 (50%) was found to have carcinoma cecum, So no resolution of mass in interval period should be under strong suspicion as two of our patients, turned out to be carcinoma cecum, though the mass reduced in size in both but persisted at 3 weeks period. On review of histopathology (table) we could gather that majority (16/24) about 2/3<sup>rd</sup> were found to have chronic fibrosing further appendicitis and these cases will not cause further recurrent appendicitis, further 6 cases have normal appendix.

Two cases underwent emergency appendectomy in waiting period due to recurrent acute appendicitis thus patients who develop recurrent acute appendicitis which usually develops in waiting period or within 1<sup>st</sup> year of diagnosis, or otherwise chances of recurrent appendicitis are negligible. Thus interval appendectomy practice after resolution of appendicular lump can be given up.

## V. Conclusion

We conclude that when appendix mass persists after 2 weeks, it is a strong reason to have surgical intervention earlier, further patients during interval period may have acute appendicitis also needs early surgical intervention. However, interval appendectomy in patients who respond well to initial conservative treatment seems unnecessary on review of histopathology (table). Hence, interval appendectomy after resolution of appendicular mass is really not needed.

**Table 1** Histopathology of Appendectomy Specimen

Diagnosis of HPE	Number
Chronic fibrosing appendicitis	16
Acute Appendicitis	02
Normal appendix	06
Carcinoma caecum	02*

\*these were cases in which resolution of mass could not occur, within 2 wks period.

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