ORIGINAL ARTICLE

# A retrospective study of 630 cases of appendicitis

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**Abstract**

**Objective: The aim of this study was to evaluate the presentation, timing of surgery and outcome of patients presenting with acute appendicitis.**

**Design: This was a descriptive study.**

**Setting and duration: This study was carried out at Surgical unit III & IV Bolan Medical College Complex Hospital Quetta from January 2008 to December 2010.**

**Methodology: 630 patients with signs and symptoms of appendicitis were included in this study.**

**Results: A total of 630 patients of appendicitis, both acute and recurrent appendicitis were operated during the study period. The mean age of patients was 30.5 years and male to female ratio was 2:1. Acute appendicitis was found in 526 (83.5 %) patients and 104 (16.5 %) were found to have Recurrent appendicitis. Appendectomy was performed within 6-8 hours of admission. No mortality was observed in this study. Post-operative complications noted in the form of wound sepsis in 54(8.5 %) patients and pelvic abscess in 12 (1.9 %) patients. The median follow up was 1 month.**

**Conclusion: Early appendectomy should be the treatment of choice in patients of acute appendicitis, but a senior surgeon should be involved in decision making and during surgery.**

**Keywords: Acute appendicitis, Appendectomy, Recurrent appendicitis**

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**Introduction:**

Acute appendicitis is the most common abdominal emergency all over the world including Pakistan. The overall life time risk has been reported to be about 6-20%. Acute appendicitis is uncommon before the age of two years and rises to a peak incidence for a subject in his/her twenties or thirties[1] (but no age group is exempted). Early appendectomy is the treatment of choice in case of acute appendicitis, delay in diagnosis and surgical treatment leads to increased rate of complications (perforation or gangrene) with significant morbidity and even mortality.[2]

Accurate diagnosis of acute appendicitis is difficult.[3] In our setup it has been observed that diagnosis of acute appendicitis is almost clinical and one senior surgeon should be involved in the process of diagnosis, otherwise diagnosis could be wrongly made or initially overlooked. The first error leads to unnecessary operation and second to delay in surgery.[4] Ideally an accurate preoperative diagnosis is required in order to avoid unnecessary morbidity or a negative appendectomy.[5]

**Patients and methods:**

The clinical records of 630 patients admitted through accidents, emergency and outpatient department of surgery (S.U III & IV) between the period of January 2008 and December 2010, that had appendectomy in the same admission were reviewed. Out of 630 patients 104 (16.5 %) were admitted for interval appendectomy and 526 (83.5 %) were admitted as acute appendicitis. Diagnosis of acute appendicitis was made by postgraduate student and confirmed by senior consultant i.e. senior registrar, assistant professor and associate professors.

Routine investigations like complete blood count, Urine analysis, Random blood sugar, X-Ray chest, HBsAg, Anti-HCV were performed in all cases. In 20-30 % of cases ultrasonography was performed. The operative findings were recorded and diagnosis confirmed during surgery. 80 % cases came for follow up to 1 month and 20 % did not report for follow up.

**Results:**

Out of 630 patients 104 patients (16.5%) were operated for interval appendectomy in elective list by one of the senior surgeons and the rest 526 patients (84.5%) were operated in emergency either by senior post graduate students, senior registrars and few cases by senior consultants. The age ranged between 13-72 years with a mean age of 30.5 years, (Table 1). The male to female ratio was 2:1. The mean hospital stay was 2-10 days and there was no mortality. The complications recorded were stitch abscess in 22 patients (3.5%), wound infection in 54 patients (8.5%) and pelvic abscess in 12 patients (1.9%). The pelvic abscesses were drained per rectally under ultrasonic guidance in 8 patients and 2 patients needed re-exploration and drainage of abscesses. All the patients with signs and symptoms of acute appendicitis were operated within 8 hours.(Table 2)

**Discussion:**

Despite all the modern laboratory and imaging techniques, acute appendicitis is essentially a clinical diagnosis even today[6]. Over 100 years have passed since McBurney reported his study on acute appendicitis in 8 patients with emphasis on early appendectomy[7]. Once clinically diagnosed one should go for urgent appendectomy to minimize the incidence of complications which might arise from delay in surgery[8].

In United Kingdom, a report on "National Confidential Inquiry Pre-operative deaths" emphasized the dangers of inappropriate surgical management and decisions made by the junior staff members at night. This led to a change in policy of some hospitals regarding surgery at night and some reports have emerged stating elective overnight delay in surgery for acute non complicated appendicitis as the practice has been found safe without increasing the complications[9]. On the other hand we adopted the policy to operate within 6-8 hours of admission, but under supervision of a senior surgeon. In our patients the morbidity is comparable with most of other studies[10].

**Conclusion:**

Early appendectomy remains the treatment of choice but a senior surgeon should be involved in decision making and operation. The cases that arrive late in night can be operated in the elective list without significant morbidity. Only the patients with signs and symptoms of localized peritonitis should be operated urgently.

**References:**


1. John Simpson, John H Scholefield, Ac Appendicitis; Surgery (International) 2005; 70: 15-18.
2. Williams GR, Presidential address: A History of appendicitis. Ann Surg. 1983; 197: 495-506.
3. Zielke A, Sitter H, Rampp T, Bohrer T, Rothmund M- Clinical decision making , ultrasonography, and scores for evaluation of suspected acute appendicitis, World J Surg. 2001; 25: 578-84.
4. Robert T, Wilcox L, Traverso W. Have the evaluation and treatment of acute appendicitis changed with new technology? Surg. Clin. North Am. 1997;77: 1355-70.
5. Malik AA, Wani Na, Continuing diagnostic challenge of acute appendicitis, evaluation through modified Alvarado score. Aust NZ J.Surg. 1998; 68: 504-5.
6. Amir M, Shami IH. Analysis of early appendectomies for suspected acute appendicitis. A prospective study. J Surg. 1992; 3(4): 25-28.
7. Mc Burney C- experience with early operative interference in cases of diseases of the vermiform appendix. N .York Med J 1889; 50:76-84.
8. Temple CL, Huchcroft SA, Temple WJ. The natural history of appendicitis in adults: A prospective study Am J Surg 1995; 21: 278-81.
9. Murphy E, Mealy K. Timing of operation for appendicitis. Br J Surg 1997; 84:1004-5.
10. Mohammad Amir and M.H. Raja. Timing for Surgery of acute appendicitis; JCPSP 2000, 10 ;( 8):295-97.


Table 1: *Age distribution in 630 patients*

| Age Range | No. of Patients (%) |
|---|---|
| 13-25 | 194 (30.8) |
| 26-45 | 334 (53.0) |
| 46-72 | 102 (16.2) |

Table 2: *Clinical and operative diagnosis in 630 patients*

| Diagnosis | No. of patients (%) |
|---|---|
| Acute appendicitis | 509 (80.8) |
| Recurrent appendicitis | 104 (16.5) |
| Complicated i.e. perforated gangrenous appendicitis | 17 (2.7) |