



To compare the safety and efficacy of conservative treatment with antibiotic versus appendicectomy for the primary treatment of uncomplicated acute appendicitis

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ABSTRACT

Background: Appendicitis as pain in Rt Iliac fossa is the commonest Surgical Emergency and Appendicectomy is one of the commonest procedures in surgery, the rate of normal appendices removed is still about 15–30%, beside Appendicectomy brings morbidities, huge economic burden and work loss. The aim of this study was to assess the safety & efficacy of treating uncomplicated Acute appendicitis conservatively with antibiotics only. **Methods:** Patients with clinical and radiological features of acute appendicitis with Alvarado score more than 7 were allocated equally in conservative antibiotic group and surgical group randomly. Follow up was done till 6 months. Broad-spectrum antibiotics & symptomatic treatment done in conservative and appendicectomy in surgery group. The follow-up period was of 06 months. **Results:** Study included 100 patients, 65 male and 35 female patients with age group 12–60 yrs. 85% patients have responded to conservative management. 10% patients developed perforated appendicitis (4%), appendicular abscess (2%) and appendicular mass (4%) as treatment failure. 6% patients in subsequent follow up period of 6 months developed recurrent appendicitis and were operated. The success rate of appendectomy group is 100% by definition, but surgery related morbidities, cost and prolonged hospital stay is much higher in comparative to conservative group. **Conclusions:** Our result shows that conservative management with many advantages as high success rate, lower recurrence rate and shorter hospitalization stay, less cost & morbidities should be tried to treat uncomplicated acute appendicitis.

Key Words: CONSERVATIVE TREATMENT, ANTIBIOTICS, ACUTE APPENDICITIS, APPENDICECTOMY.

INTRODUCTION:

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Acute appendicitis remains a common surgical emergency in patients presenting with acute Rt iliac fossa pain, pain. Appendectomy is one of the commonest procedures in surgery. In spite of various investigations used to improve the accuracy of diagnosis, the rate of normal appendices removed is still about 15–30%. Negative Appendectomy is done very much. Appendectomy causes surgical & anaesthetical morbidities, huge economic burden and work loss due to prolonged stay & rest. Therefore, Conservative treatment with good antibiotics, now a days available in wide variety group, has been tried to treat uncomplicated acute appendicitis. Multiple studies in recent years have suggested that conservative management by antibiotic therapy can be useful in treating acute appendicitis. Studies have also suggested that immediate appendectomy can be avoided at least for 24 hours without increasing morbidity and mortality if antibiotics are given. Appendectomy may not be necessary for most of the cases for acute uncomplicated appendicitis as the disease may resolve

spontaneously without any need of surgical approach.

This conservative management approach has many advantages including high success rate, lower recurrence rate, shorter hospitalization, reduced morbidity & mortality along with reduced cost of treatment. Consequently, the aim of this study was to evaluate the efficacy & safety of treating uncomplicated Acute appendicitis with antibiotics and symptomatic medicines versus emergency appendectomy so that past fear of development of complication of Appendicular perforation, lump formation, abscess leading to septicaemia and death may be avoided if Appendectomy not done in emergency for acute appendicitis.

MATERIAL & METHODS

This study included Study 100 patients, 65% male and 35 female patients with mean age 34.4 years admitted in Department of General Surgery of NDMC Medical College & HR hospital delhi in year 21-22. Patients were diagnosed as of uncomplicated acute appendicitis by clinical examination with modified Alvarado score more than 7, total Leucocyte count and USG abdomen along with urine analysis and Xray KUB region were done for making clinical diagnosis of acute uncomplicated appendicitis. After confirming the diagnosis of acute uncomplicated appendicitis by Modified Alavardo Score, all 100 clinical participants were randomized in both above group by an independent resident blindly. Exclusion criteria was USG or clinical findings suggestive of right iliac fossa pain having duration more than 48 hour, appendicular lump, appendicular perforation, recurrent appendicitis or co-morbid diseases like diabetes, hypertension, HIV, pregnancy and antibiotic allergy.

On the above criteria in 50% of patients emergency appendectomy was done administrating one dose of Inj Amoxyclav 1.2gm and inj Metronidazole 500mg iv prophylactically. Remaining 50% patient treated conservatively by administrating Inj

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Amoxyclav 1.2gm 12hrly and inj Metronidazole 500mg iv 8hrly with symptomatic medicines for 02 days. Patients were monitored if develop any sign of deterioration as suspected perforation or abscess formation, or peritonitis, emergency appendectomy was done. Otherwise if Patient improves, pin, vomiting, fever subsiding accepting orally, then oral medicines of these antibiotics Tab Augmentin 1.2 gm twice a day and Tab metronidazole 500 mg thrice a day with supportive symptomatic medicines started. After further improvement, patients were discharge in a day or two with advice to use these for 5 days with supportive medicines and asked to follow up in opd atleast once a month for 6 months.

RESULTS

Study included 100 patients, 65 male and 35 female patients within age group 12 to 60 yrs. 85% patients have responded to conservative management. 10% patients developed perforated appendicitis (4%), appendicular abscess (2%) and appendicular mass (4%) as treatment failure. 6% patients in subsequent follow up period of 6 months developed recurrent appendicitis and were operated. 60% of patients were admitted with feature of acute appendicitis in surgical ward with duration of symptom less than 24 hours. 40 % patients presented with symptoms presenting for more than 24 hours but less than 48 hours. Raised. All patients assessed as per modified Alvarado score, 88% had migratory RIF pain, with 82% had tenderness in RI region. Leukocytosis is second most common (90%) and 84% of patients had fever. In surgery group, 06 patients (12%) developed wound infection, of which 3 patients required secondary suturing due to wound dehiscence. 1 patient of these 3 patients

later on developed incisional hernia after 4 months. The other 3 patients had seroma formation resulting in skin gap which healed by secondary intention. 01 Pt developed peritonitis and 01 had features of Intest obstruction as complication of surgery but were managed conservatively. No Mortality noticed. Mean duration of hospital stay in conservative group was 3.65 days while in operative group was 4.95 days. Those patients of conservative/ antibiotic group who required operation had median stay of 7 days. Hence there is significance difference in hospital stay in surgical group patients and those who underwent appendectomy due to development of localized complications after conservative management with antibiotics. The patients who were subjected to conservative treatment by antibiotics returned to normal activity with a mean duration of 7.2 day, while the mean duration of return to normal activity for surgical group was 10.9 days.

DISCUSSION

Acute appendicitis remains a common surgical emergency in patients presenting with acute Rt iliac fossa pain, pain. Appendectomy is one of the commonest procedures in surgery. In spite of various investigations used to improve the accuracy of diagnosis, the rate of normal appendices removed is still about 15–30%. Negative Appendectomy is done very much. Appendectomy causes surgical & anaesthetical morbidities, huge economic burden and work loss due to prolonged stay & rest. Therefore, Conservative treatment with good antibiotics, now a days available in wide variety group, has been tried to treat uncomplicated acute appendicitis. In this study 100 patients were admitted for uncomplicated acute appendicitis as per

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Alvarado score and divided in to 02 group randomly, in one group conservative treatment with antibiotics done and in another group appendectomy performed. In conservative group 85% patients have responded to conservative management but 10% patients developed perforated appendicitis

(4%), appendicular abscess (2%) and appendicular mass (4%) as treatment failure. 6% patients in subsequent follow up period of 6 months developed recurrent appendicitis and were operate In surgical group had no recurrence but 06 patients (12%) developed wound infection, of which 3 patients required secondary suturing due to wound dehiscence. 1 patient of these 3 patients later on developed incisional hernia after 4 months. The other 3 patients had seroma formation resulting in skin gap which healed by secondary intention. 01 Pt developed peritonitis and 01 had features of Intest obstruction as complication of surgery but were managed conservatively. No Mortality noticed. Mean duration of hospital stay in conservative group was 3.65 days while in operative group was 4.95 days. Those patients of conservative/ antibiotic group who required operation had median stay of 7 days. Hence there is significance difference in hospital stay in surgical group patients and those who underwent appendectomy due to development of localized complications after conservative management with antibiotics. The patients who

were subjected to conservative treatment by antibiotics returned to normal activity with a mean duration of 7.2 day, while the mean duration of return to normal activity for surgical group was 10.9. Therefore it is established that Conservative treatment of uncomplicated Acute Appendicitis is quite effective ,safe procedure to save many morbidities, long stay ,work loss, cost etc associated with emergency appendicectomy being done immediately for every patient.

STATISTICAL ANALYSIS

TAB 1. AGE & SEX WISE DISTRIBUTION

Age Group	Male	Female
12-30	35	20
31-45	25	13
46-60	05	02

Tab 2. RESPONSE WITH TREATMENT

RESULT	CONSERVATIVE GROUP	SURGERY GROUP
Cure	85%	NIL
Perforation	04%	NIL
Abscess	02%	NIL
Lump	04%	NIL
Recurrence	06%	NIL

TABLE 3: TIME DURATION OF SYMPTOMS IN STUDY

Time Duration	No. of Patients	Percentage
< 24 hrs	60	60
24-48 hrs	40	40
Total	100	100

TABLE:4 MEAN DURATION OF HOSP STAY

Group	Mean stay in Days
Conservative	3.65
Surgical	4.95

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TABLE 5: PATIENTS AS PER MODIFIED ALVARDO SCORE SYSTEM

Symptoms/Clinical Findings	Present	Absent	%
Migratory RIF Pain	88	12	88
Anorexia	49	51	49
Nausea and Vomiting	68	32	68
Tenderness in RIF	82	18	82
Elevated Temperature 99oF (37oC)	84	16	84
Leukocytosis	90	10	90

Table 6: SURGICAL COMPLICATIONS

Type	Cases	Percentage
Wound Infection	06	12
Peritonitis	01	02
Intestinal obstruction	01	02
Incisional hernia	01	02

TABLE:7 RETURN TO NORMAL ACTIVITY

Group	Mean Duration
Conservative	7.2
Surgical	10.9

CONCLUSIONS

Our result shows that conservative management of uncomplicated acute appendicitis with antibiotics and supportive medicines has got with many advantages as high success rate, lower recurrence rate and shorter hospitalization stay, less cost & morbidities. So it should be tried to treat uncomplicated acute appendicitis with constant monitoring & follow up to prevent any untoward complications of this approach.

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