

Post Appendectomy Complication Analysis at Karnali Academy of Health Sciences Teaching Hospital, Jumla

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ABSTRACT

Background: Acute Appendicitis is common surgical disease throughout the world and Appendectomy is common surgical Emergency operation. The Aims of this study is to analyse post appendectomy complications at Karnali Teaching Hospital, Jumla, Nepal.

Methods: This is Retrospective study conducted at the Karnali Teaching Hospital over a periods of Two years (2021-2023) under the Department of Surgery, Karnali Academy of Health Sciences, Jumla-which is Rural community based Hospital. The Datas were analysed by appropriate statistical tools.

Results: A Total of 70 Appendectomy performed over that periods and amongs them 36(51.5%) were Females and 34 (48.5%) were males. Main post surgical complications were postoperative Ileus (7%), SSI (4.3%) and seroma (2.8%). Anaesthesia related complications were found more significant in our study, in compare to other studies.

Conclusion: Post Appendectomy surgical complications were relatively low in our study, its may be due to high altitude but post- anesthetic complications were relatively high.

Keywords: *appendectomy; post-appendectomy complications; Karnali Teaching Hospital; Jumla*

INTRODUCTION

Acute Appendicitis is the most common surgical emergency worldwide with life time risk for Appendicitis 7.5 to 12%, commonly occurring in adolescent and young Adults.¹ The etiology of the Appendicitis is still obscure and multifactorial.² The incidence of Acute appendicitis is high in summer months.³ Highest appendectomy executed were July to september and February.⁴ The incidence of the disease is increasing in the developing countries but decreasing in western countries.⁵ The term appendicitis was first described by Reginold h. Fitz in 1886.⁶ This disease is notorious and delayed diagnosis can lead to complications with high mortality and morbidity.^{7,8} The first successful appendectomy was done in Devenport, Iowa in 1885 AD by Dr. William west Grant. Complications of appendectomy include wound infection, Abscess, Ileus mainly. In recent years, the classification of acute appendicitis into two types: simple appendicitis and complex appendicitis (perforating or necrotizing).⁹ Complications rates

from 5-20 % and even upto 31.4%.^{10,11} In patients with complex appendicitis in one study, 65 patients developed complications, among them 55 were infectious complications.¹² Cutler and Scott state that, "with the period that follows operative intervention begin the trials and tribulations of the surgeons".¹³ This statement is probably nowhere more true than in the case of those patients who require surgical attention because of a septic appendix and in whom infection has extended beyond the confines of this organ. Diffuse peritonitis is most often the result of sudden perforation in the obstructive type of acute appendicitis which according to Allen,¹⁴ is responsible for 95% of the deaths from this disease.

METHOD

This is retrospective study which was done at the rural community based Karnali Teaching Hospital, Jumla from 17th July 2021 to 16th July 2023, which is situated 2600 meter from the sea level. The approval was taken from institutional Review committee of Karnali Academy of Health Sciences Jumla. First of all

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proposal for study was submitted to our IRC, Karnali Academy of Health Sciences, Jumla. The Data were retrieved from Hospital Record section and entered. Data were analyzed by using the statistical package for social sciences SPSS-20. The variables were analysed by using proper statistical tools. All patients who were admitted under the department of surgery, Karnali academy of health sciences teaching hospital, Jumla-which were diagnosed as a acute appendicitis and performed Appendectomy were included in this study .The variables that were studied were age, sex, common postoperative complications and post Anesthetic complications mainly. For these we used Operation theatres data and register, surgery wards records, patients personal files and surgery outpatients follow up register mainly. All Post appendectomy cases during above time only involve in this study but Appendicitis with conservative Treatment were Excluded from our study. After Finalization of Article it was Discussed again with IRC Team,Karnali Academy of Health Sciences, Jumla and given IRC Clearance letter for publication in any Journals.

RESULTS

Total 70 Appendecto my was performed during our two years study period in Department of surgery, Karnali Teaching Hospital, which was 0.7% (Total numbers of surgery during that periods in our Department was 1002). Almost all 68 (97.2%) were open Appendectomy and only 2(2.8%) were Laparoscopic Appendectomy. In all cases of appendicitis antibiotics given to coverage anaerobic and aerobic bacteria. Females were 36 (51.5) and Males were 34 (48.5%). According to age distribution 21-40 years age group was in top and below 20 years age group was in second, among appendectomy i.e. young and active age groups patients mostly suffered (Table 1).

Age group	Frequency (%)
<20	25(37%)
21-40	30(41.5%)
41-60	10(14%)
>61	5(7.5%)

The data highlights postoperative complications observed among patients, with postoperative ileus being the most common, affecting 5 patients (7%), followed by surgical site infections (SSI) in 3 patients (4.3%), and seroma in 2 patients (2.7%). These findings emphasize the varying prevalence of complications following surgery (Table 2).

Surgical Complications	Frequency (%)
Post-Operative Ileus	5(7%)
SSI	3(4.3%)
Seroma	2(2.7%)

Post-operative Ileus managed by conservatively and Seroma was just drained by pucking of wound or by opening of one or two stitches. SSI managed with proper antibiotics, dressing and secondary suturing. In simple appendicitis only seroma occurred but in complicated appendicitis post-operative Iles and SSI occurred in our study. Simple Appendicitis were 25(35.5%) and complicated Appendicitis were 45 (64.5%), among them only 8 (11.75%) were Peritonitis. Anesthesia related complications were Retention of urine in 17 (24.5%) patients, Post anesthesia Nausea and Vomiting in 10(14 %) patients and post -spinal Headache was in 7 (10.5%) patients ,which were managed symptomatically. In all Adults Appendectomy were done under spinal anesthesia (SAB in 85.7%) where in children's appendectomy done under General Anesthesia (GA in 14.3%) (Table 3).

Anesthetic Complications	Frequency (%)
Urinary Retention	17(24.5%)
Nausea & Vomiting	10(14%)
Post Spinal Headache	7(10.5%)

There were no significant intra operative complications occurred. No Blood Transfusion required for all appendectomy patients. There was no faecal fistulas noted post operatively. No any patients came as post-operative follow -up up to today of stump Appendicitis and Incisional hernia. No death occurred during our study periods. All Histopathological examination showed varieties of appendicitis i.e. simple cattharral appendicitis to gangrenous appendicitis and perforated appendicitis.

DISCUSSION

Appendectomy is one of the most common emergency surgeries. Complications after Appendectomy can result in prolonged Hospitalization, increased Medical expenses and compromised overall prognosis.¹⁵ In some studies reported only the most common complications i.e. SSI, Intra-abdominal Abscess, Ileus and postoperative Pyrexia. As a postoperative complication, general peritonitis must be regarded as one of the most serious, since the Mortality is always high. From their study of the Literature ochsner, Gage and Garside¹⁶ conducted that peritonitis may be the cause of death in as many as 77.5% of patients dying of Appendicitis. Fortunately we have no any mortality, although we have operated for 8 cases of complicated Appendicitis i.e. perforated Appendicitis. Van Beuren¹⁷ reports that of 130 patients with acute ileus operated on at the New-York presbyterian Hospital from 1932 to 1935, eight percent, occurred as complications of Acute Appendicitis. In our study the Ileus was reported in 5(7%) patients and managed conservatively. There was a relatively high rate of complications in patients with appendicitis which were mostly Infectious complications¹² i. e. 14.6%. In our study SSI was relatively low, if compare with this study (4.3%). Infectious complications at 11.1% in most of the studies.¹⁸ The surgical complications after appendectomy in our study is low it's may be due to high altitude and cold climate or may be due to good immunity power of the peoples of these parts of Nepal. Post Anesthetic complications are relatively high mainly Retention of Urine (24.5%), where as in 5-7% in other study.¹⁹ The other Post –Anesthetic complications were comparable with our study. The study by Tie Wu

et al mentioned that the patients with complicated appendicitis had a higher risk of complications in their study. For that study they followed the most widely accepted definition of complicated and simple appendicitis. Simple Appendicitis is Catahrral Appendicitis and complicated Appendicitis includes Perforated Appendicitis, Early Appendicular Lump, Early Appendicular Abscess mainly. Infectious complications, at 11.1% were the most common types of complications, and this was comparable to results reported by other studies.¹² Coller and Potter²⁰ found eighty-eight cases of general peritonitis among 36 patients with acute appendicitis, in all stages of the disease, admitted to the university of Micigan Hospital over a three year periods, an incidence of 22.2 percentages. Stafford and sprong²¹ found 196 instances of general peritonitis in a similar group of 1,317 patients admitted to the Johns Hopkins Hospital over an eight years periods. The incidence of peritonitis in this groups was 14.9 percentages. In our study among appendicitis which were operated that time had only 8 (11.75%), which is comparable with other studies. As this is retrospective study we have many limitations.

CONCLUSION

Our post-Appendectomy surgical complications are low but our sample size is relatively low in numbers (70 Appendectomy within two years). Our Post-Anesthetic complications after appendectomy were relatively high. It give us good lessons and we needs prospective study in this Topic in future.

Limitations: This is retrospective study and our sample size is relatively low in numbers, that's why our study has many limitations.

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