



APPENDECTOMY AMONG PATIENTS ADMITTED IN TERTIARY CARE HOSPITAL, NORTH LAKHIMPUR, ASSAM: A DESCRIPTIVE CROSS SECTIONAL STUDY.

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ABSTRACT

Background : One of the most common cause of pain abdomen found in Emergency room, Out patients and In patients department is Acute appendicitis. And Appendectomy is most commonly performed surgical procedures for Acute appendicitis. In our study we tried to find out the burden of Appendectomy patients in Lakhimpur Medical College and Hospital, a peripheral tertiary Medical college in Assam.

Aim: Our aim is to find out the prevalence of appendectomy among patients admitted in department of general surgery, Lakhimpur Medical College and Hospital, North Lakhimpur.

Methods : After obtaining approval from institutional ethical committee, data was collected from medical records department of Lakhimpur Medical College and Hospital, North Lakhimpur. Data was collected for a period of 30 months, i.e from 25th June 2021 to 25th Dec 2023. The total number of patients admitted in the department of surgery was taken, which was found to be 6713. Our study included 1020 patients who underwent appendectomy. The demographic profile of the patients were collected in respect to age and sex.

Results : The Prevalence of Appendectomy Patients was found to be 15.19 %, of which 57.3 % were males and 42.7% were females. The most common indication for appendectomy was recurrent appendicitis with 71.3%.

Keywords : Appendicitis, Appendectomy, Appendectomy, Prevalence.

INTRODUCTION

The appendix was first described by anatomist Berengario de Carpi, in 1521 and the term 'appendix' was used by Reginaid Fitz in the year 1886.

Appendectomy is one of the most commonly performed surgical procedures for acute appendicitis¹. Despite advancements and appendectomy being one of the common surgical procedures, etiology of appendicitis is poorly known, and severity of the disease cannot be distinguished based on paraclinical, clinical and imaging modalities². Acute appendicitis is the most common type of appendicitis that can be due to environmental factors, hyperplasia and fecolith³. Additionally, infections are also known to cause/trigger appendicitis^{4,5}. Generally, it is classified based on simple and complex (perforated and gangrenous)⁶. 2-7 % of appendicitis are reported with complex findings such as abscess⁷.

Approximately 6% of the population are at risk of developing appendicitis during their lifetime⁸, therefore much have been directed towards early diagnosis and intervention.

Acute appendicitis is essentially a clinical diagnosis. Though appendicitis is a common general surgical emergency, some appendicitis are difficult to diagnose⁹. Various investigations used to assist in the diagnosis of appendicitis include ultrasonography, scoring systems, computed tomography, magnetic resonance imaging and laparoscopy.

The etiological factors still remain unknown and obscure although appendicitis is a common disease. It is rare in rural communities in economically less developed countries and its incidence is rising with economic development, migration to urban areas and emigration to western countries. No individual with an appendix seems immune from the risk of developing appendicitis, but many contributory factors may be responsible.

Aim:

Our aim is to find out the prevalence of appendectomy among patients admitted in department of general surgery, Lakhimpur Medical College and Hospital, North Lakhimpur.

Objectives:

To evaluate the prevalence of appendectomy in patients admitted in surgery department, Lakhimpur Medical College and Hospital.

Methods :

After obtaining approval from institutional ethical committee (lmc/iec(h)/23), data was collected from medical records department of Lakhimpur Medical College and Hospital, North Lakhimpur, a peripheral tertiary medical care in Assam. Data was collected for a period of 3 years from 25th June 2021 to 25th Dec 2023. The total number of patients admitted in the department of surgery was taken, which was found to be 6713 . Our study included 1020 patients who underwent appendectomy. The demographic profile of the patients were collected in respect to age and sex.

Results:

In our study, a total of 6713, patients were found to be admitted in the department of surgery, and 1020 (15.19 %) had undergone appendectomy, of which 584 (57.3 %) were males and 436 (42.7 %) were females. Age distribution of patients were from (15 -77) yrs in males and (14-63) yrs in females. The most common indication of appendectomy was found to be recurrent appendicitis with 728 patients (71.3%), followed by acute appendicitis with 275 (27%) patients.

Table 1 Age Distribution of Patients undergoing Appendectomy

Age group	Male	Female	Total
11-20	28	22	50
21-30	190	110	300
31-40	172	138	310
41-50	117	104	221
51-60	63	60	123
61-70	10	2	12
71-80	4	0	4
Total	584	436	1020

Figure 1

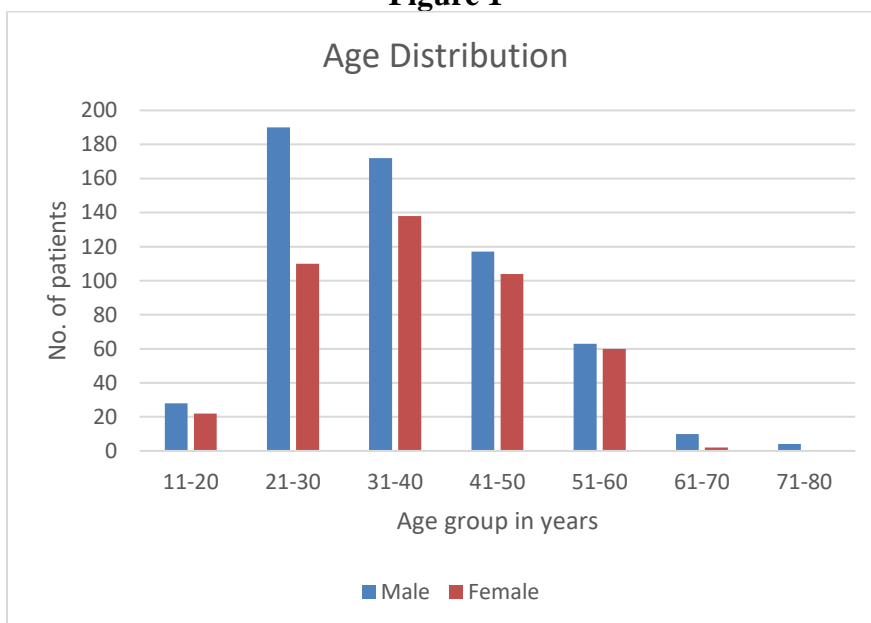


Table 2 Gender Distribution of Patients undergoing Appendectomy

Gender	no	%
Male	584	57.2
Female	436	42.8

Figure 2

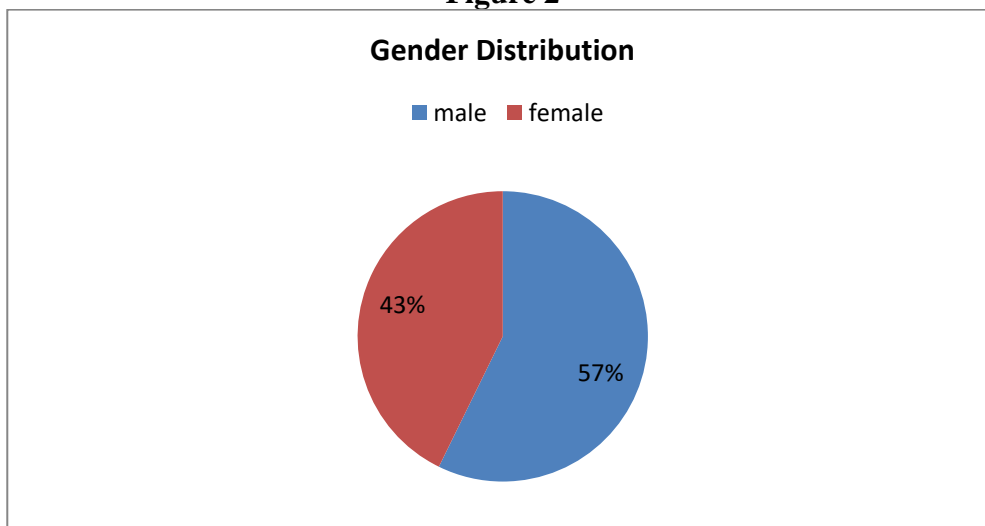
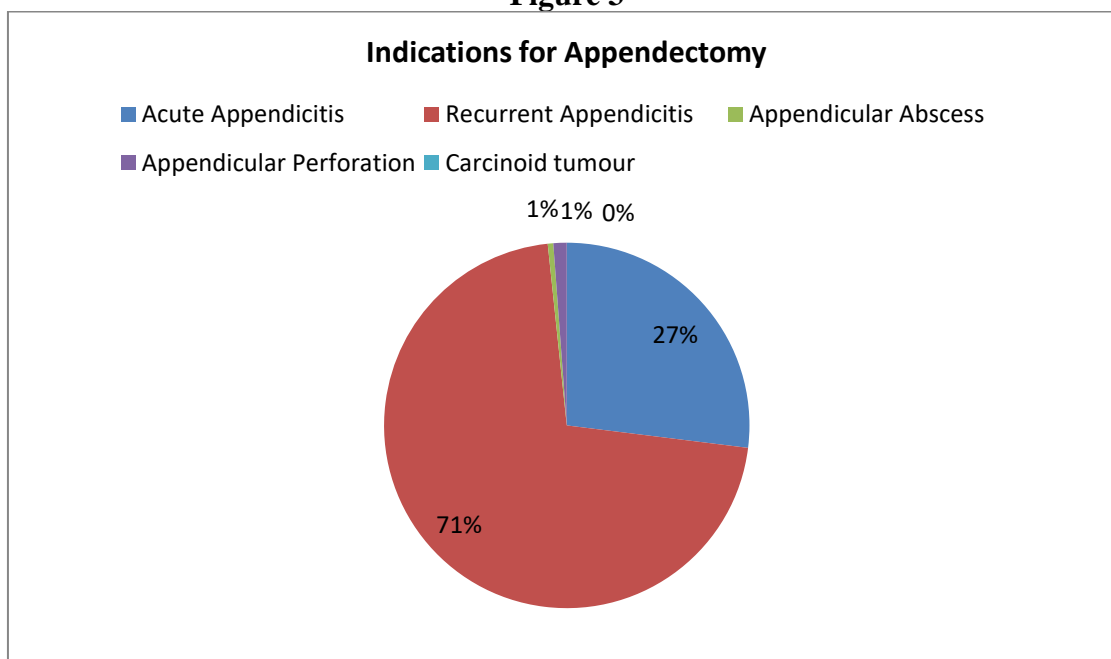


Table 3 Indication of Patients undergoing Appendectomy

Indications of Appendectomy	no	%
Acute Appendicitis	275	27
Recurrent Appendicitis	728	71.3
Appendicular Abscess	5	0.5
Appendicular Perforation	12	1.17
Carcinoid tumour	0	0.0

Figure 3



Discussions:

The inflammation of the appendix is known as appendicitis, and onset within 24 hours is considered to be acute appendicitis¹⁰. The incidence of acute appendicitis is 86 per 100,000 per year¹¹. In our study, we found the prevalence of appendicitis to be 1020 (15.19%) out of 6713 patients admitted in surgical department. Our findings are similar to K. Deo et al (2023)¹², but is less than the findings of Chaudhari YP et al. 21.50%¹³. The most common age group for appendicitis was found to be (21-30) in males and (31-40) in females. And males (57.2%) were more affected than females (42.8%). This findings co relate with the study findings of Chaudhari YP et al¹³. The most common indication of appendectomy in our study was recurrent appendicitis, 728 (71.3%) followed by acute appendicitis with 275 (27%) patients.

Conclusion:

In our study, we found out the prevalence of appendectomy to be 15.19%. Males with 57.2% were found to affected more than females with more common in (21-30) age group. And the most common indication being recurrent appendicitis.

References :

1. M. Sertelli, G.L. Baiocchi, S Di Derverio, F. Ferrara, F.M. Labricciossa, L. Ansaloni, et al; Prospective observational study on Acute appendicitis worldwide (POSAW). World J Emerg Surg. 2018 Apr16;13:19. doi:10.1186/s13017-018-0179-0

2. L.H. Maghsoudi, A. Soltanian, A. Shirzadi, R. Alizadeh-Kashani, M. Ahmadinejad; Biomarker of urinary 5-HIAA as a valuable predictor of acute appendicitis. *Pract Lab Med.* 2020 Dec 13;23:e00198
3. F. Zarei, M. Ahmadinejad; Comparison of wound infection in uncomplicated acute appendicitis by subcuticular suture and interrupted suture. *Infect Disord Drug Targets.* 2021 Sep 16;21(6):e270421190327
4. M. Dzabic, L. Bostrom, A. Rahbar; High prevalence of inactive cytomegalovirus infection in the appendix of immuno competent patients with acute appendicitis. *Inflamm Bowel Dis.* 2008 Feb;14(2):236-41
5. L.W. Lamps; Infectious causes of appendicitis. *Infectious Disease Clinics North Am,* 2010 Dec;24(4), pp 995-1018
6. A. Bhangu, K. Soreide, S. Di Saverio, J.H. Assarsson, F.T. Drake; Acute appendicitis: modern understanding of pathogenesis, diagnosis and management. *Lancet.* 2015 Sep 26;386(10000):1278-1287
7. A. Pooria, A. Pourya, A. Gheini; Appendicitis clinical implications in negative appendicectomy. *International Journal of Surgery Open;* vol 29, February 2021, pages 45-49
8. Hartwig K, Karl S, Jon AS, Egil A, Arne N, Tone HL, et al; Incidence of Acute Non perforated and perforated appendicitis: Age specific and Sex specific analysis. *World J Surg.* 1997;21: 313-317
9. Wilcox RT, Traverso LW. Have the evaluation and treatment of acute appendicitis changed with new technology? *SurgClin North Am.* 1997
10. Jones MW, Lopez RA, Deppen JG; Appendicitis. *StatPearls(Internet).* TreasureIsland(FL): StatPearls Publishing; [2022 May 1]; J.2022. Jan
11. Korner H, Sondenaa K, Soreide JA, Andersen E, Nysted A, Lende TH, et al. Incidence of acute nonperforated and perforated appendicitis: age specific and sex specific analysis. *World J Surg.* 1997 Mar-Apr;21(3):313-7
12. K. Deo, P. Yogi, A. Niroula, S. Maharjan; Appendicitis among Patients admitted to the department of surgery of a tertiary care centre: a descriptive cross sectional study; *JNMA.* 2023 Jan 31;61(257):10-13
13. Chaudhari YP, Jawalw PG. Prevalence of appendicitis at surgery inpatient department of a tertiary care hospital: a descriptive study. *MedPulse.* 2015 nov;2(11)76870