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Research Article

**AN OBSERVATIONAL STUDY TO KNOW
EPIDEMIOLOGICAL EFFECTS ON ACUTE APPENDICITIS**

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Abstract:

Objective: To know the seasonality and frequency of acute appendicitis in different age and sex groups.

Work Design: A Cross section descriptive study.

Place and Duration: In DHQ Hospital Faisalabad for two year duration from June 2016 to June 2018 after approval from the ethical committee.

Material and methods: The data of all cases diagnosed with appendicitis between the ages of 5 and 70 years were recorded in the registry of the hospital's pavilion and operating room. Urinary tract infection, ovarian cysts cases were not selected. The data were analyzed using SPSS for Windows version 21.

Results: The total number of patients diagnosed with acute appendicitis in this period ranged from 559, mean age 24.66 (mean \pm SDD), 325 male patients and 234 persons, ranging from 5 to 70 years. women (ratio of men to women). 1.4: 1). In the adolescent age group, acute appendicitis was more common (47.76%). Appendicitis frequencies were higher in summer and spring (28.5% each) and lower in autumn (21.5%).

Conclusion: In this study, there were significant differences in the prevalence of acute appendicitis in adolescents, males, and in the spring and summer seasons.

Key words: appendicitis, appendectomy, epidemiology.

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INTRODUCTION:

Claudius Amyand, in 1735 He performed his first appendectomy at George Hospital since then its pathology continues to be the most common abdominal surgery emergency, and many questions remain to be answered. It has fascinated researchers to conduct studies on variations in prevalence for different genders, age groups, demographic and epidemiological conditions since it was first described. The rate of appendicitis varies according to different regions and countries. It has been suggested that it is associated with factors such as eating habits, hygienic conditions, but is not widely accepted. The difference in the prevalence of appendicitis has recently been noticed by some researchers for different seasons and genders. Epidemiological data on appendicitis remain rare in populations in Pakistan and Asia, as most studies have been performed in western populations. We have recently been affected by the acute appendicitis seasonality in order to start this epidemiological study in Punjab, Pakistan. The aim of this study was to investigate changes in the frequency of appendicitis in different seasons, gender and age groups.

MATERIALS AND METHODS:

This Cross section descriptive study was held in DHQ Hospital Faisalabad for two year duration from June 2016 to June 2018 after approval from the ethical committee. Data collection sources were

hospital and operating room registry books. Surgical treatment and conservative treatment included all patients diagnosed with appendicitis between the ages of 5 and 70 years. Patients with confounding diagnoses, ie pregnancy, urinary tract infections, ovarian cysts were excluded. Data were analyzed and analyzed in SPSS version 21.

RESULTS:

A total of 559 patients were diagnosed with appendicitis in two years, of which 238 (42.6%) were detected in 2016 and 321 (57.4%) in 2017. The age range of the patients included in the study was 5 to 70 years (mean = 24.66 years, SD + 11.96). The highest rates of appendicitis were in the age group of 21 to 30 years (n = 156, 27.91%) and then in the age group of 11 to 20 years (n = 267, 47.76%). This rate was lower in the age group 50 years. Both women and men were most common in the age group of 11 to 20 years with appendicitis (n = 145) (n = 122) and 46.18% with 52.9% and less common age > 50 years. Age deficiency values were 14 (2.5%) appendicitis (n = 325, 58.1%), more frequent in men and women (n = 234, 41.9%) than men (n = 234, 41.9%). (Calculated by Fisher's unilateral exact test).

This study reveals that appendix was (28.5%, n = 159), peaked in summer and spring (n = 159, 28.5%) and revealed a marked seasonal variation in rates of N appendicitis in the lowest fall (Fig. 3 = 120, 21.5%). and winter (n = 121, 21.6%).

Table 1: Month gender cross-tabulation

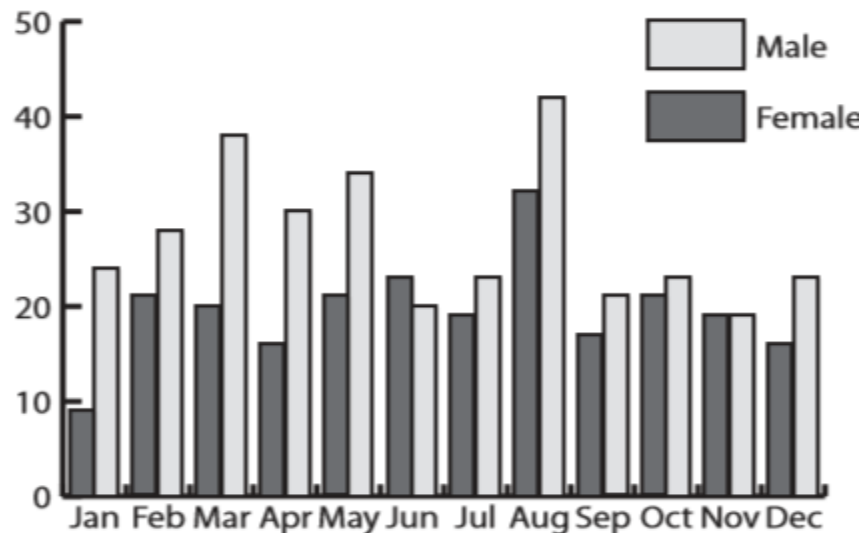
Month	Gender		Total
	Female	Male	
Jan	9	24	33
Feb	21	28	49
Mar	20	38	58
April	16	30	46
May	21	34	55
Jun	23	20	43
Jul	19	23	42
Aug	32	42	74
Sep	17	21	38
Oct	21	23	44
Nov	19	19	38
Dec	16	23	39
Total	234	325	559

Appendicitis in women (Table 2) was lower in summer (31.62%) than in summer (31.62%) and less common in winter (19.66%), whereas in male appendicitis (Table 2) was higher for bow (31.38%) and higher (19.38%).

Table 2: Season, gender cross tabulation

Season	Gender		Total
	Female	Male	
Autumn	57	63	120
Spring	57	102	159
Summer	74	85	159
Winter	46	75	121
Total	234	325	559

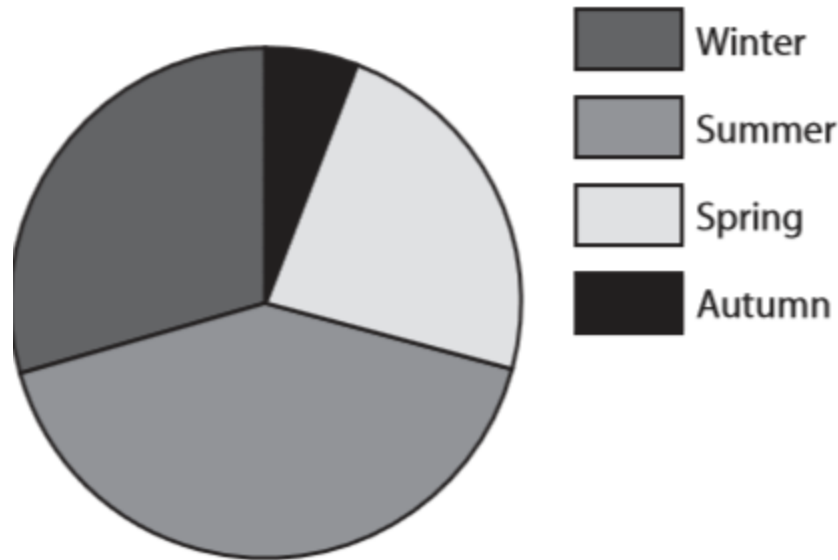
In the age group of 11 to 20 years, the prevalence of appendicitis was in the spring (n = 77, 28.8%), followed by summer (n = 74, 27.72%) and the lowest in autumn (n = 58, 21.72%). Similar results were observed in the age group of 21 years and 30 years, in spring (n = 48, 30.7%) and in summer (n = 43, 27.56%). Appendicitis rates were highest in autumn (n = 16, 32.65%) between 31-40 years of age (Figure 2 and Table 3). The frequency of appendicitis in different months and sex is tabulated in Table 1 and Figure 1.



DISCUSSION:

In this study, in 559 cases, 42.6% and 57.4% in 2016 were found in 2017 which revealed growing trends of appendicitis in two years unlike Lee JH and colleagues. In his studio in Seoul, Korea, 20017. Korner H et al. 12 also reported similar fixed trends in 2010. On the other hand, Al-Omran M et al. 13 reported a reduction in the frequency of appendicitis in studies in Ontario, Canada. by NMA Williams et al. In another study, a slight decrease was observed in the frequency of appendicitis in 1975 by Livingston EH et al. These differences can be due to observations of the geographical and racial differences or the use of sophisticated tools, such as CT, and laparoscopy may differ from the reported

appendicitis in all age groups after an increase in the frequency of reported appendicitis. The high frequency of appendicitis was 11 to 20 years of age in the 21 to 30-year-old group, 27.91, followed by 47.76%. These observations are supported by studies from different parts of the world. Aslam MN et al Lahore had similar results in Pakistan and saw 65% of patients aged 15 to 30 years. While Noudeh YJ et al showed in the study in Tehran most of the men and women aged 20 to 29 years had the highest rate of appendicitis in the age of 10 to 19 years. Al-Omran M et al., Canada, Livingston EH et al. Aqueous B from Turkey and the United States also reported the results support others.



In other studies, it was consistent with the findings that 1 (58.1% male and 41.9% female): In this study, the male to female ratio was 1.4. Overall, appendicitis frequencies were more common in spring and summer and lower in autumn (21.5%) (28.5%, in all seasons). In males, appendicitis was less common (31.38%), lower in autumn (19.38%). In women, appendicitis was more frequent in summer (31.62%) and less frequent in winter (19.66%). The prevalence of appendicitis in the summer was reported by Canada's Al-Omran M et al., Addiss DG et al., US Luckmann R et al. California, Noudeh YJ et al., Tehran, and Aslam MN et al. Our group has more moisture during the rainy summer season with bad sanitation, which leads to increased rates of infestation and bacterial and viral infections and parasites infestation may be the reason we have increased the frequency of appendicitis in these months. This is a descriptive study from a single center that included cases of only two years, so the possibility of error cannot be overlooked, so there should be more multicentre studies to determine demographic and epidemiological trends in the frequency of appendicitis.

CONCLUSION:

There were significant differences in the frequency of appendicitis for different seasons, sex groups and age. Appendicitis has a clear seasonality in summer and spring. Appendicitis rates were higher in males than females. Prevalence peaks in adolescent age group. Other studies on epidemiology and demography can help in appropriately allocating health resources for the treatment of appendicitis.

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