

**Research Article**

**Seasonal Variation of Acute Appendicitis in Paediatric Population  
Presenting At a Tertiary Care Hospital of Lahore**

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**ABSTRACT**

Appendicitis is a common pathology. Appendectomy is one of the most commonly performed surgical procedures. It has been thought that there is a variation in presentation of appendicitis during different seasons. In this study, we sought to collect data regarding appendicitis in the paediatric population in regard to variation over different months. This was an observational descriptive study. We collected and analyzed data of all patients presenting with acute appendicitis at Department of Paediatric Surgery, Mayo Hospital Lahore from 1<sup>st</sup> July, 2016 to 30<sup>th</sup> June, 2017. A total of 382 patients presented with acute appendicitis and underwent appendectomy.

Based on our results, it is concluded that appendicitis is more common in male children (65.7%) and there seems to be an increased incidence of appendicitis during the warmer months with the most number of cases during the month of May (15.44%). Average age of the patients was 10 years.

**KEY WORDS:** Appendix, Seasonal Variation, Paediatric Population

**INTRODUCTION**

Appendicitis is the inflammation of the vermiform appendix. Although classically it usually has a well-defined and documented presentation, it can present in a variety of manners, often having symptoms which overlap with other clinical conditions which can cause increase in diagnostic delay. Despite advances in diagnostic modalities, diagnosis of appendicitis remains essentially clinical. Appendicitis remains a clinical emergency and is one of the most common causes of acute abdominal pain. In patients of paediatric population, it is of further concern since an underdeveloped omentum means a delay in diagnosis eventually resulting in perforation and a prolonged morbidity.

The exact etiology of appendicitis remains unclear. It has been postulated that multiple causes may contribute including obstruction, decreased dietary fiber, pollution and familial susceptibility. Appendicitis occurs in all age groups but is rare in infants. Appendicitis is most common in the second decade of life after which the incidence continues to decline. Although population based studies about impact of seasonal variables on appendicitis have been published, but so far there is no clear consensus. Very few studies have examined the incidence of appendicitis in children alone.<sup>1,2,3</sup>

The aim of our study was to evaluate the seasonal variation in presentation of acute appendicitis in paediatric population.

### MATERIAL AND METHODS

This was an observational descriptive study carried out in the Department of Paediatric Surgery, Mayo Hospital Lahore over a period of 1 year from 1<sup>st</sup> July, 2016 to 30<sup>th</sup> June, 2017. We collected data of all patients presented with diagnosis of acute appendicitis. Patients underwent appendectomy and were admitted to our ward. Analysis of data was done to note the variation of number of cases throughout the year.

### RESULTS

A total of 382 patients presented with acute appendicitis and underwent appendectomy. 151(65.7%) of the patients were male while 131(34.29%) of the patients were female. Average age of the patients was 10 years. The most number of cases were seen during the month of May (15.44%).

There was a clear rise in cases during the spring and summer months with nearly 50% cases presenting during the months of March, April, May & June.

Results are shown below in pie chart and graph.

### DISCUSSION

Since the first documentation by Sir Claudius Amy in 1736, it has remained unclear why there is variation about susceptibility of children to appendicitis.<sup>4</sup> Environmental factors, dietary habits, socio-economic status, seasonal differences and other factors could play a role.<sup>5,6,7,8</sup> The exact cause and mechanism of this is unknown.

We found that there was a greater incidence of appendicitis in male paediatric population as compared to females. Out of the 382 patients that presented, **151** were **male(65.7%)**, with **females** being **131(34.29%)**. Similar findings were also noted by other researchers who found higher incidence of appendicitis in male population.<sup>9,10</sup>

We noted that the incidence of appendicitis was more during **spring and summer**. Nearly **65%** of cases were during the time period from **March to July**. In a study of 608,116 patients with appendicitis, peak incidence of appendicitis was found in children and greatest incidence was noted during the summer.<sup>11</sup>

### CONCLUSION

On the basis of our results, we conclude that appendicitis is more common among **males** in paediatric age group with average age of **10 years** and the disease is more common during the **spring and summer months**.

### ACKNOWLEDGEMENTS

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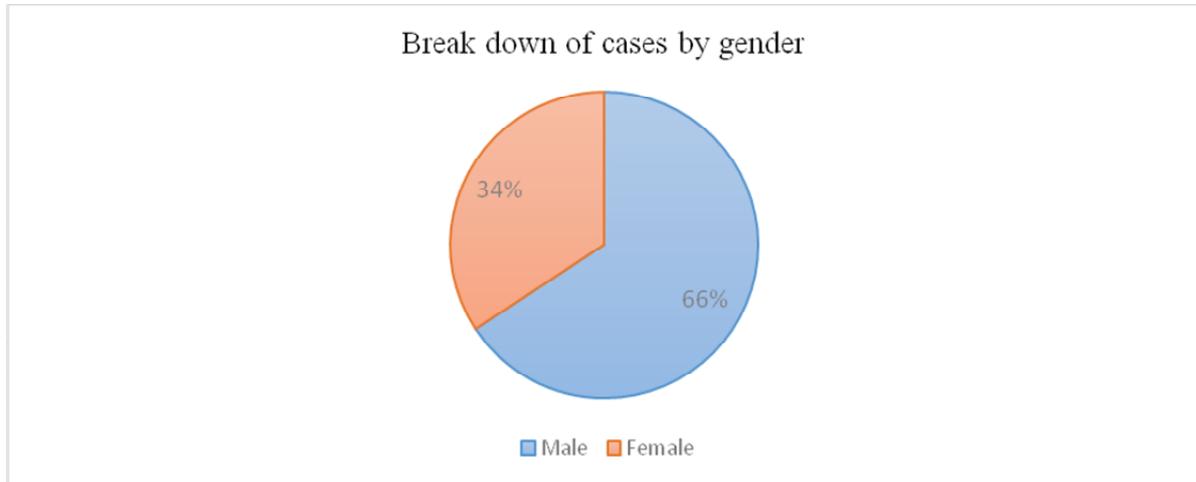
After that, all praises to **HIS LAST PROPHET (S.A.W)** whose unlimited guidance illuminated our path of knowledge.

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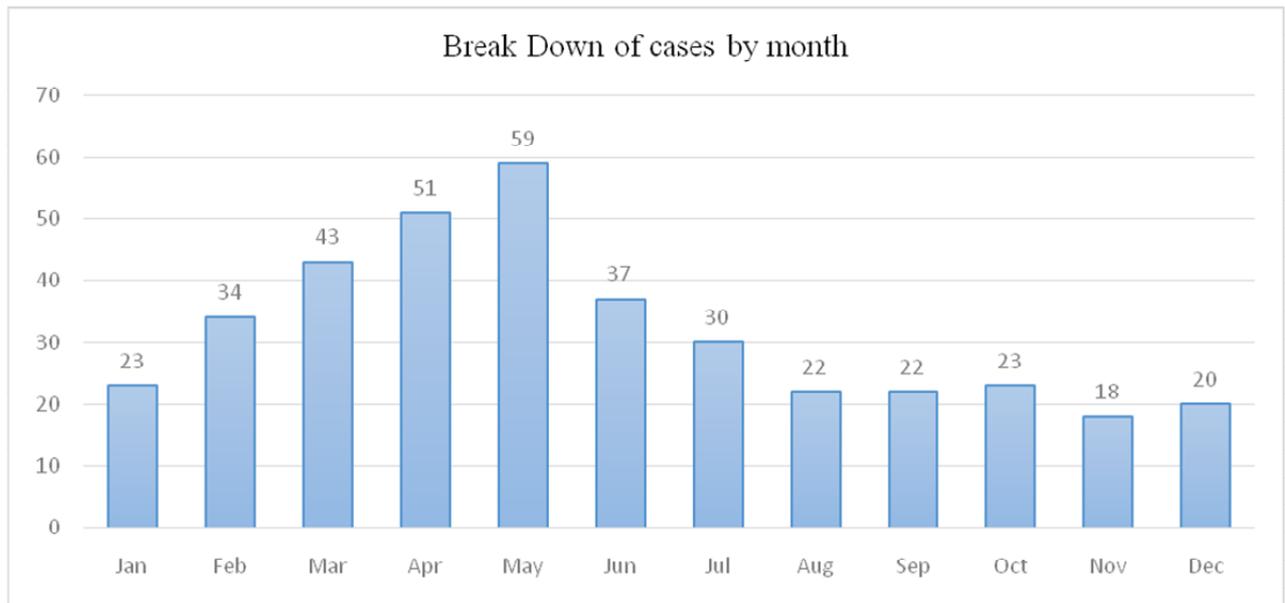
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**PIE CHART: BREAK DOWN OF CASES BY GENDER**



**TOTAL CASES = 382**

**GRAPH: BREAK DOWN OF CASES BY MONTH**



**TOTAL CASES: 382**

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