

# Incidence of Appendicitis with Relation to Age, Sex, Occupation, Socio-Economic Status, Dietary Habits & Urban or Rural Area of District Sialkot

1. Tanveer Hameed Sheikh 2. Khalid Azeem 3. Maqsood Ahmad khan 4. A.Hamid  
5. Muhammad Sabir 6. Musaab Hamid

1. Asstt. Prof. of Surgery, ITH, Sialkot 2. Asstt. Prof. of Surgery, ITH, Sialkot 3. Asstt. Prof. of Anesthesia, ITH, Sialkot 4. Prof. of Forensic Medicine, IM&DC, Sialkot 5. Prof. of Anatomy, IM&DC, Sialkot 6. MO, IDC, Sialkot.

## ABSTRACT

**Objective:** To study the incidence of appendicitis with relation to age, sex, occupation, socio economic status, dietary habits & urban or rural area of district Sialkot.

**Study Design:** Retrospective study

**Place and duration of study:** This study was conducted at the Islam Teaching Hospital Sialkot from 1<sup>st</sup> January 2012 to 31 December 2012.

**Materials and Methods:** 100 cases of appendicitis were randomly selected from the patients attending to OPD & emergency of Islam Teaching Hospital Sialkot & its peripheral Districts. The data was collected on written proforma and analyzed for results

**Results:** In this study the incidence of appendicitis was the highest 39 % at the age 11 – 20 years and the lowest at the age of 71 – 80 years (03 %)

It was seen that incidence of appendicitis was 52 % (52 cases) in male and 48 % (48 cases) in female as shown in Table No.2. The incidence was the highest in students 36 % (36 cases) as compared to business man 03 % (03 cases) as shown in Table No.3. In this study the incidence of appendicitis was 37 % (37 cases) in people having high fiber diet as compared to those people who had low fiber diet 63 % (63 cases) as shown in Table No 4. The incidence of appendicitis was 62 % (62 cases) in people living in urban area has compared to people living in rural area 38 % (38 cases) which was half of the urban area as shown in Table No 5. At the last it was seen that the incidence was 60 % (60 cases) in lower class and 40 % (40 cases) high gentry as shown in Table No 6.

**Conclusion:** The incidence of appendicitis is much more in 11 – 20 year of age & Males were more prone as compare to Female. Students & laborers were more prone as compared to other groups of patients. Low fiber dietary habits were more in percentage as compared to patient having high fibre dietary habits & percentage of patients of appendicitis were double in Urban area as compared to rural area. The incidence of appendicitis was more in patients of low socio economic status as compared to high socio economic status.

**Key Words:** Appendicitis, incidence, dietary, occupation, socio economic, urban or ruler.

## INTRODUCTION

Appendicitis is a condition characterized by inflammation of the appendix. It is classified as a medical emergency and many cases require removal of the inflamed appendix, either by laparotomy or laparoscopy. Untreated, mortality is high, mainly because of the risk of rupture leading to infection and inflammation of the intestinal lining (peritoneum) and eventual sepsis clinically known as peritonitis which can lead to septic shock.<sup>1</sup> Reginald Fitz first described acute and chronic appendicitis in 1886,<sup>2</sup> and it has been recognized as one of the most common causes of severe acute abdominal pain worldwide. A correctly diagnosed non – acute form of appendicitis is known as “rumbling appendicitis”.<sup>3</sup>

The term “pseudo appendicitis” is used to describe a condition mimicking appendicitis.<sup>4</sup> It can be associated with *Yersinia enterocolitica*.<sup>5</sup>

**Design & site of appendix in abdomen:** The definitive diagnosis is based on pathology. The histologic findings of appendicitis are neutrophils in the muscularis propria.<sup>6</sup>

Periappendicitis, inflammation of tissue around the appendix, is often found in conjunction with other abdominal pathology.<sup>7</sup>

## MATERIALS AND METHODS

100 cases of appendicitis were randomly selected from the patients attending to OPD & emergency of Islam Teaching Hospital Sialkot & its peripheral Districts. The data was collected on written proforma and analyzed for results

## RESULTS

The incidence of appendicitis with relation to age was 1 – 10 years (18 %) 11 – 20 years 39 patients (39 %), 21 – 30 years 12 patients (12 %), 31 – 40 years 12 patients (12 %), 41 – 50 years 11 patients (11 %), 51 – 60 years 03 patients (03 %), 61 – 70 years 03 patients (03 %), 71 – 80 years 02 patients (02 %). The incidence of the appendicitis is much more in 11 – 20 years (39 %) & minimum incidence at the age of 70 – 80 years (02 %) as shown in Table No. 1. It was seen that incidence of appendicitis was 52 % (52 cases) in male and 48 % (48 cases) in female as shown in Table No.2. The incidence was the highest in students 36 % (36 cases) as compared to business man 03 % (03 cases) as shown in Table No.3. In this study the incidence of appendicitis was 37 % (37 cases) in people having high fiber diet as compared to those people who had low fiber diet 63 % (63 cases) as shown in Table No 4. The incidence of appendicitis was 62 % (62 cases) in people living in urban area has compared to people living in rural area 38 % (38 cases) which was half of the urban area as shown in Table No 5. At the last it was seen that the incidence was 60 % (60 cases) in lower class and 40 % (40 cases) high gentry as shown in Table No 6.

**Table No.1: Incidence of appendicitis with relation to age**

| S.No. | Age (Year)   | No. of Patients | Percentage   |
|-------|--------------|-----------------|--------------|
| 01    | 1 – 10       | 18              | 18 %         |
| 02    | 11 – 20      | 39              | 39 %         |
| 03    | 21 – 30      | 12              | 12 %         |
| 04    | 31 – 40      | 12              | 12 %         |
| 05    | 41 – 50      | 11              | 11 %         |
| 06    | 51 – 60      | 03              | 03 %         |
| 07    | 61 – 70      | 03              | 03 %         |
| 08    | 71 – 80      | 02              | 02 %         |
|       | <b>Total</b> | <b>100</b>      | <b>100 %</b> |

**Table No.2: Incidence of appendicitis with relation to sex**

| S.No. | Sex          | No. of Patients | Percentage   |
|-------|--------------|-----------------|--------------|
| 01    | Male         | 52              | 52 %         |
| 02    | Female       | 48              | 48 %         |
|       | <b>Total</b> | <b>100</b>      | <b>100 %</b> |

**Table No.3: Incidence of appendicitis with relation to occupation**

| S.No | Occupation     | No. of Patient | Percentage   |
|------|----------------|----------------|--------------|
| 01   | Student        | 36             | 36 %         |
| 02   | House wife     | 21             | 21 %         |
| 03   | Laborer        | 29             | 29 %         |
| 04   | Servant        | 06             | 06 %         |
| 05   | School Teacher | 05             | 05 %         |
| 06   | Business Man   | 03             | 03 %         |
|      | <b>Total</b>   | <b>100</b>     | <b>100 %</b> |

**Table No. 4: Incidence of appendicitis with relation to dietary habits**

| S.No | Dietary Habits  | No. of Patient | Percentage |
|------|-----------------|----------------|------------|
| 01   | High Fibre diet | 37             | 37 %       |
| 02   | Low Fibre diet  | 63             | 63 %       |
|      | <b>Total</b>    | <b>100</b>     | <b>100</b> |

**Table No.5: Incidence of appendicitis with relation to urban / rural area**

| S.No | Residential Area | No. of Patient | Percentage   |
|------|------------------|----------------|--------------|
| 01   | Urban            | 62             | 62 %         |
| 02   | Rural            | 38             | 38 %         |
|      | <b>Total</b>     | <b>100</b>     | <b>100 %</b> |

**Table No.6: Incidence of appendicitis with relation to socio – economic status**

| S. No | Socio Economic Status | No. of Patient | Percentage   |
|-------|-----------------------|----------------|--------------|
| 01    | Low                   | 60             | 60 %         |
| 02    | High                  | 40             | 40 %         |
|       | <b>Total</b>          | <b>100</b>     | <b>100 %</b> |

## DISCUSSION

The acute appendicitis is an emergency of developed and under developed nations.<sup>[08]</sup> It is commonly present irrespective race, age, socio economic status, occupation and residential area.<sup>[09]</sup> This problem has put extra economical burden on families / communities.<sup>[10]</sup> The mortality rate is more in under developed countries and population of rural area.<sup>[11]</sup> In our study the incidence of appendicitis was much more at 11 – 20 year of age & decline as the age advance. Males were more prone for incidence of appendicitis as compare to Females. The percentage of students & laborers were more prone for incidence of appendicitis as compared to other groups of people. Patient having low fibre dietary habits were more prone in percentage of appendicitis as compared to patients having high fibre diet. The percentage of patients of appendicitis were double in urban area as compared to rural area.

The incidence of acute appendicitis declined in western country between 1930s & other early 1990s.<sup>[12]</sup> It is the most common cause of an acute abdomen in the UK.<sup>[13]</sup> About 10 % of the population will develop acute appendicitis.<sup>[14]</sup> Appendicitis was most common between the ages of 10 – 20 years but can occur at any age.<sup>[15]</sup> Appendicitis is most common in male.<sup>[16]</sup> A normal appendix is removal at 10 – 20 % of appendicectomies.<sup>[17]</sup>

The results of our study resemble with the study of kang JY etal. The incidence of appendicitis is going to

be increased in burger families due to change of dietary habits and low fibre diet.

## CONCLUSION

The incidence of appendicitis is much more in 11 – 20 year of age & Males were more prone as compare to Female. Students & laborers were more prone as compared to other groups of patients. Low fiber dietary habits were more in percentage as compared to patient having high fibre dietary habits & percentage of patients of appendicitis were double in Urban area as compared to rural area. The incidence of appendicitis was more in patients of low socio economic status as compared to high socio economic status.

**Suggestions:** The aggravating factor such as dietary habits should be changed. Occupation & socio economic status should be improved / try to change to decrease the incidence of appendicitis

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### Address for Corresponding Author:

**Dr. Tanveer Hameed Sheikh,**  
Assistant Professor of Surgery,  
Islam Teaching hospital Sialkot