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A Study on the Profile of Signs and Symptoms Among Appendicitis Patients Admitted in A Tertiary Health Care Centre in Chennai

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ABSTRACT

***Aim**: To study the profile of patients with appendicitis and also to know the association between age and certain symptoms of appendicitis among patients with appendicitis.*

***Methodology**: A study was conducted based on medical records of 60 patients with appendicitis that were randomly chosen from the medical records department.*

***Results**: The symptoms were more commonly seen among the younger age group (≤ 35 years) when compared to the older age group (>35 years). All 100% of the study subjects had pain as a symptom.*

KEYWORDS :

Introduction:

Appendicitis is the most common abdominal emergency[1], Appendicitis is most common between the ages of 10 and 20 years, but no age is exempt. A male preponderance exists, with a male to female ratio of 1.4:1 [2]. . The cause of acute appendicitis is unknown but is probably multifactorial; luminal obstruction and dietary and familial factors have all been suggested. Appendicectomy is the treatment of choice and is increasingly done as a laparoscopic procedure[3]. In Asian and African countries, the incidence of acute appendicitis is probably lower because of dietary habits of the inhabitants of these geographic areas. Dietary fiber is thought to decrease the viscosity of faeces, decrease bowel transit time and discourage the formation of faecolith, which predispose individuals to obstructions of the appendiceal lumen[4]. If left untreated, appendicitis has the potential for severe complications including perforation or sepsis and may even cause death and there are limited Indian studies regarding epidemiology of acute appendicitis and difficulties in diagnosis [5]. Hence a study was taken up to determine the profile of patients with appendicitis.

Study Methodology:

Study Design: Analytical cross sectional study based on medical records

Selection and distribution of participants: The sample was done on 60 medical records of appendicitis patients that were randomly selected from the medical records department. The time frame was cases that were admitted in the surgical department with appendicitis between January 2015 and June 2016

Sample size: It was decided to study a sample of 60 patients

Ethical Considerations: Since it was a study based on medical records that carried less than the minimal risk to patients and no patient identity was revealed, there were no ethical considerations.

Definition and Classification of Main study Variable:

Age: Subjects were classified into two groups based on their age as those with age ≤35 years and those with age > 35 years.

Appendicitis: A diagnosis of appendicitis was made by the surgeon based on the clinical signs and symptoms and investigation findings. Histopathological confirmation was done after the appendix was removed from the body.

Data Analysis: The data entry and analysis were done using statistical package for social sciences (SPSS) version 22. The final data was summarized into percentages and 95 % C.I was calculated for the prevalence rates. Cross tabulations for various variables. Chi-square values were calculated wherever appropriate and p values were based on the 2 –tailed values. Associations were assessed and 95% confidence interval of odds ratios were found using Epi Info version 7.1.2.

Results

Results

Socio – demographic profile of the study subjects

In the present study, 56.7 % of the participants were females, 75% belonged to the age group of below or equal to 35 years of age, 98.3 were on a mixed diet. Details can be seen in table 1

Table 2: Sign and symptom profile of the subjects with appendicitis

Pain was seen in all 100% of the cases, right iliac fossa tenderness was seen in 93.3% of the cases with a 95% C.I of 86.97 – 99.63, fever was seen in 53.3% of the cases with a 95% C.I of 40.68 – 65.92, vomiting was seen in 46.7 % of the cases with a 95% C.I of 34.08 – 59.32 and leukocytosis was seen in 15% of the subjects and the 95%C.I of 5.97 – 24.03. Details can be seen in Table 2.

Table 3: Association between age and certain clinical findings in appendicitis

When compared to the above 35 years age group the symptoms of vomiting, guarding and rigidity were 2.09 times, 5.69 times and 3.02 times more common among the ≤ 35 years respectively. However none of the associations were statistically significant. Details can be seen in Table 3.

Gender – wise and age – wise differences in the surgical options

Gender – wise and age – wise differences in the surgical options of appendicitis can be seen in Fig 1 and Fig 2 respectively.

Discussion

In the present study appendicitis was more frequently seen among females (56.7%) when compared to males (43.3%), which was contradictory to the findings of a clinical review that came to the conclusion that males were more affected [2] and that the study has a male preponderance, however the study was done in different populations and so direct comparisons cannot be made. In the present study, it

was seen that 98.3% of the subjects suffering from appendicitis were on a mixed diet, this could be because of the lack of fibre[4] in the non – vegetarian diet, which has been established as a risk factor of appendicitis. Guarding as a sign was 5.69 times more common among the younger age ≤35 years when compared to the > 35 years age group, but this association was not statistically significant. The other symptoms like vomiting and rigidity were also more common among the ≤35 years group, however none of the associations were statistically significant. The lack of statistical significance in the current study could be because of the inadequate sample size in the present study and so further studies are needed to verify the associations of the current study

Profile of patients with appendicitis in a tertiary care centre

Table 1: Socio demographic profile of the study subjects

Variable (Classification of variable)	Number	Percentage
Gender		
Male	26	43.3
Female	34	56.7
Age		
≤ 35 years	45	75
> 35 years	15	25
History of diabetes mellitus		
Yes	3	5
No	57	95
Type of diet		
Vegetarian	1	1.7
Mixed	59	98.3

Table 2: Profile of signs, symptoms and investigation findings in patients with appendicitis

Symptom	Number	Percentage	95% confidence interval
Pain	60	100	100
Right iliac fossa tenderness	56	93.3	86.97 – 99.63
Fever	32	53.3	40.68 – 65.92
Vomiting	28	46.7	34.08 – 59.32
Loss of appetite	9	15	5.97 – 24.03
Guarding	14	23.3	12.6 – 34
Rigidity	10	16.7	7.26 – 26.14
Rebound tenderness	4	6.7	0.37 – 13.03
Anaemia	22	36.7	24.5 – 48.9
Leucocytosis	9	15	5.97 – 24.03

Table 3: Association between age and findings in cases of appendicitis

Variable	Classification of Variable(-number in the group out of 60)	Number with younger age ≤ 35 years (out of 45)	Odds ratio (95% C.I of odds ratio)	Chi – square value	P - value
Vomiting	Yes (28)	23	2.09 (0.62 – 7.1)	0.80	0.37
	No (32)	5			
Guarding	Yes (14)	13	5.69 (0.68 – 47.8)	1.99	0.16
	No (46)	1			
Rigidity	Yes (9)	8	3.02 (0.35 – 26.46)	0.39	0.53
	No (51)	37			

Figure 1: Gender- wise differences in the surgical methods

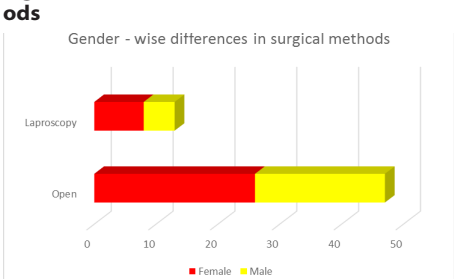
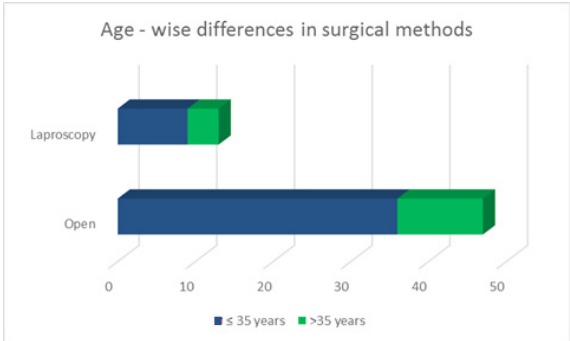


Figure 1: Age- wise differences in the surgical methods



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