

A study of various factors associated with recurrent tonsillitis at tertiary health care center

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Abstract

Background: The tonsils serve immune acquisition and immune defense by antigen presentation, which is why they contain T-lymphocytes, macrophages and germinal centers of B-lymphocytes. **Aims and Objectives:** To study Various factors associated with recurrent tonsillitis at tertiary health care center. **Methodology:** After approval from institutional ethical committee a cross-sectional study was carried out at the department of Otolaryngology in the patients who were diagnosed as Chronic tonsillitis at tertiary health care center during one-year period i.e. January 2016 to January 2017. All the patients were examined in details and information like age, sex, Associated factors like H/o Overcrowding, H/o Smoking, H/o Obesity (BMI > 30), H/o Diabetes, H/o immunocompromised diseases was recorded from the patients. The statistical analysis done Pearson-co efficient correlation done by SPSS 19 version software. **Result:** The majority of the patients were in the age group of i.e. <10 were 26.79%, followed by 10-20-23.21, 20-30 were 19.64%, 30-40 -16.07%, 40-50-8.93%, >50 -5.36%. The majority of the patients were young and middle aged this correlation was statistically significant (Pearson r = -0.99, 95% confidence interval = -1.0 to -0.88, P value (two-tailed)-0.0003***). The majority of the patients were Male i.e. 62.50 % and Female were 37.50%. The majority of the patients were associated with the risk factors like Young age i.e. 50.00% followed by H/o Overcrowding -39.29%, H/o Smoking -26.79%, H/o Obesity (BMI > 30) -21.43%, H/o Diabetes -16.07%, H/o immunocompromised disease -8.93%. **Conclusion:** It can be concluded from our study that the chronic tonsillitis was significantly associated with the young and middle aged and other associated factors were H/o Overcrowding, H/o Smoking H/o Obesity (BMI > 30), H/o Diabetes, H/o immunocompromised disease etc.

Key Words: Recurrent tonsillitis, Overcrowding, Diabetes.

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INTRODUCTION

The tonsils serve immune acquisition and immune defence by antigen presentation, which is why they contain T-lymphocytes, macrophages and germinal centres of B-lymphocytes³. They are the first and easiest-

to-reach station of the mucosa associated lymphoid tissue system (MALT) in humans^{1,2,4}. Since the main phase of the immune acquisition continues until the age of 6, the *palatine tonsils* are physiologically hyperplastic at this time^{5,6}. Then there is an involution, which is reflected mostly in a regression until the age of 12⁷. The lymphatic tissue is separated by a more or less rough capsule from the surrounding muscle (superior pharyngeal constrictor)⁸. Tonsillitis is a common childhood infectious disease that involves the parenchyma of the palatine tonsils. Although tonsillitis has few long-term effects, recurrent tonsillitis causes significant morbidity and time lost from school or work.⁹ The definition of recurrent may vary somewhat, but the criteria used recently as a measure of severity were¹¹ or more episodes of true tonsillitis per year, symptoms recurring for at least a year, and episodes that are disabling and that prevent normal

functioning.⁹ In children, sore throat may be part of the early symptom complex of upper respiratory tract morbidity. Although most other childhood upper respiratory tract diseases tend to improve with time, there is no evidence of spontaneous resolution of recurrent tonsillitis.¹² The limited data available provide no evidence of a difference between surgical and medical treatment for recurrent tonsillitis.⁹ To date, neither genetic nor environmental risk factors for tonsillitis have been fully explored.¹¹

MATERIAL AND METHODS

After approval from institutional ethical committee a cross-sectional study was carried out at the department of Otolaryngology in the patients who were diagnosed as Chronic tonsillitis at tertiary health care center during one-year period i.e. January 2016 to January 2017. All the patients were examined in details and information like age, sex, associated factors like H/o Overcrowding, H/o Smoking, H/o Obesity (BMI > 30), H/o Diabetes, H/o immunocompromised diseases was recorded from the patients. The statistical analysis done Pearson-co efficient correlation done by SPSS 19 version software.

RESULT

Table 1: Distribution of the patients as per age

Age	No.	Percentage (%)
<10	15	26.79
10-20	13	23.21
20-30	11	19.64
30-40	9	16.07
40-50	5	8.93
>50	3	5.36
Total	56	100.00

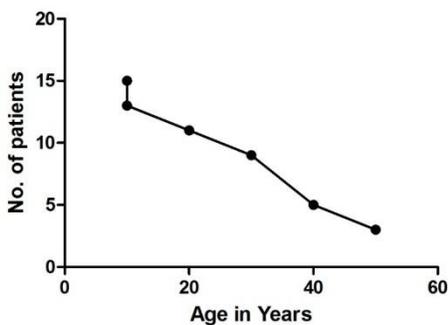


Figure 1:

The majority of the patients were in the age group of i.e. <10 were 26.79%, followed by 10-20-23.21, 20-30 were 19.64%, 30-40 -16.07%, 40-50-8.93%, >50 -5.36%. The majority of the patients were young and middle aged this correlation was statistically significant (Pearson r = -0.99, 95% confidence interval = -1.0 to -0.88, P value (two-tailed)-0.0003***)

Table 2: Distribution of the patients as per the sex

Sex	No.	Percentage (%)
Male	35	62.50
Female	21	37.50
Total	56	100.00

The majority of the patients were Male i.e. 62.50 % and Female were 37.50%.

Table 3: Distribution of the patients as per the risk factors associated

Risk factors associated	No.	Percentage (%)
Young age	28	50.00
H/o Overcrowding	22	39.29
H/o Smoking	15	26.79
H/o Obesity (BMI > 30)	12	21.43
H/o Diabetes	9	16.07
H/o immunocompromised disease	5	8.93

The majority of the patients were associated with the risk factors like Young age i.e. 50.00% followed by H/o Overcrowding -39.29%, H/o Smoking -26.79%, H/o Obesity (BMI > 30) -21.43%, H/o Diabetes -16.07%, H/o immunocompromised disease -8.93%.

DISCUSSION

Recurrent attacks of tonsillitis remain a nagging problem and challenge for the Otorhinolaryngologist, in spite of antibiotic administration. The surface and core tonsillar pathogenic flora may be different in recurrent tonsillitis as indicated by several studies.¹⁷ Normal throat flora are the common organisms harboured in the tonsillar fossa. 34 to 80% of all cases of tonsillo-pharyngitis have been attributed to bacterial cause.^{13,14,15} Commonest pathogenic bacteria being the Group A Beta Haemolytic Streptococcus, accounting for 24 to 65%.¹⁶ Chronic fibrotic changes in the tonsillar tissue due to recurrent infection might also be a cause of persistence of pathogens in the core. Study by Shaikh *et al* showed commonest organism to be Staphylococcus.¹⁸ In our study we have seen that The majority of the patients were in the age group of i.e. <10 were 26.79%, followed by 10-20-23.21, 20-30 were 19.64%, 30-40 -16.07%, 40-50-8.93%, >50 -5.36%. The majority of the patients were young and middle aged this correlation was statistically significant (Pearson r = -0.99, 95% confidence interval = -1.0 to -0.88, P value (two-tailed)-0.0003***). The majority of the patients were Male i.e. 62.50 % and Female were 37.50%.The majority of the patients were associated with the risk factors like Young age i.e. 50.00% followed by H/o Overcrowding -39.29%, H/o Smoking -26.79%, H/o Obesity (BMI > 30) -21.43%, H/o Diabetes -16.07%, H/o immunocompromised disease - 8.93%.

CONCLUSION

It can be concluded from our study that the chronic tonsillitis was significantly associated with the young and middle aged and other associated factors were H/o Overcrowding, H/o Smoking H/o Obesity (BMI > 30), H/o Diabetes, H/o immunocompromised disease etc.

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