



CLINICAL AND BACTERIOLOGICAL STUDY OF ACUTE TONSILLITIS

Sadhana Joshi¹, Gaurav Parashar²

¹ Senior Demonstrator Department of Microbiology, ² Senior Resident Department of ENT.

¹⁻² RVRS Medical College, Bhilwara

Conflicts of Interest: Nil

ABSTRACT:

Background: Tonsillitis is inflammation of tonsils, a common clinical condition caused by either bacteria or viral infection. It affects significant percentage of population more so in children. The condition can occur occasionally or recur frequently. Acute tonsillitis is characterized by visible white streaks of pus on tonsils and the surface of the tonsils may become bright red color.

Methods: The study was conducted on patients between 1 to 50 yrs of age of either sex and with history of tonsillitis and presenting in ENT OPD. A total number of 50 patients were included in the study. The bacteriological work was carried out in the Department of Microbiology.

Results: The bacteriological studies indicated the occurrence of predominant bacteria β - Haemolytic Streptococci (54.00%), followed by coagulase positive Staphylococci (12.0%) and Pneumococci (10.00%) and only one case of presence of Corynebacterium diphtheria was observed.

Conclusion: The bacterial infection is more prevalent in the age group of 6-12 years and β - hemolytic Streptococci to be the most predominant bacteria responsible for tonsillitis infection.

Keywords: Acute tonsillitis, clinical study, bacteriological study.

Introduction

Tonsils are paired lymphoid glands present laterally on each side of oral cavity. They form part of Waldeyer's ring and are sentinels to guard against infections. Each tonsil is bounded by pillars anteriorly by Palatoglossus and posteriorly by palatopharyngeus. Laterally it is related to tonsil capsule loose areolar tissue, veins, glossopharyngeal nerve, superior constrictor muscle. Medial surface of tonsil is in contact with the lumen of oral cavity. This surface does not possess any tough continuous layer to prevent any entry of bacteria resulting in tonsillitis.¹

Tonsillitis is inflammation of tonsils, a common clinical condition caused by either bacteria or viral infection. It affects significant percentage of population more so in children. The condition can occur occasionally or recur frequently. Acute tonsillitis is characterized by visible white streaks of pus on tonsils and the surface of the tonsils may become bright red colour. The bacterial tonsillitis is caused mainly by β haemolytic Streptococcus, called strep throat and to lesser

extent by Staphylococcus aureus and several other bacteria. The more common symptoms of tonsils are sore throat, red swollen tonsils, pain when swallowing, fever, cough, headache, tiredness, chills, swollen lymph nodes in the neck and pain in the ears or neck and the less common symptoms include nausea, stomach ache, vomiting, furry tongue, bad breath and change in voice and difficulty in opening of mouth.²

Materials and Methods

The study was conducted on patients between 1 to 50 yrs of age of either sex and with history of tonsillitis and presenting in ENT OPD. A total number of 50 patients were included in the study. The bacteriological work was carried out in the Department of Microbiology. Specimens, one from the tonsillar surface and another from the cryptomagna were collected by using sterile cotton swabs, placed in sterile bottles aseptically, brought to the laboratory and subjected for direct microscopic examination of the pathogens followed by the isolation of the causal agents on different media viz., sheep blood agar, chocolate agar, Mc Conkey agar etc. The data collected

were analyzed with respect to age, sex, occupation, socioeconomic status, clinical manifestations and bacteriological results.

Results

Among the reported age groups, maximum tonsillitis cases were observed in the preteen age

group (6-12 years) with 62 % followed by teen age groups (13-18 years) 20%, children (1-5 years) 10% and the least incidence of 8% in more than 18 Yrs. The distribution of tonsillitis was more in males patients (56%) compared to female patients (44%).

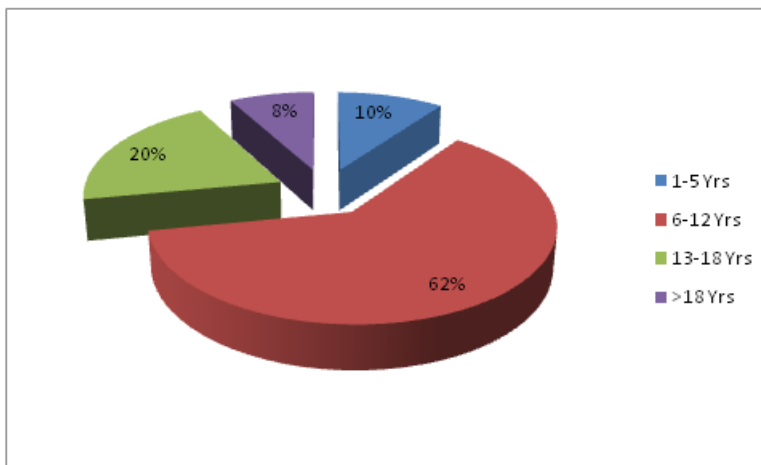


Table 1: Symptoms of tonsil patients

Symptom	No of cases	Percentage
Sore throat	50	100.00
Fever	36	72.00
Odynophagia	16	32.00

The sore throat was observed in all the patients, fever in 72% and odynophagia in 32% patients.

Table 2: Bacteria isolated from tonsillitis infected persons.

Bacteria isolated	No of cases	Percentage
β-hemolytic Streptococci	27	54.00
Coagulase +ve Staphylococci	6	12.00
Pnemococci	5	10.00
Haemophilus influenza	2	4.00
Coagulase +ve Staphylococci & Pnemococci	2	4.00
Klebsiella & Streptococcus pyogens	3	6.00
Pseudomonas & Klebsiella	2	4.00
Pnemococci & α-haemolytic Streptococci	2	4.00
Corynebacterium diphtheria	1	2.00

The bacteriological studies indicated the occurrence of predominant bacteria β- haemolytic Streptococci (54.00%), followed by co-agulase positive Staphylococci (12.0%) and Pnemococci (10.00%) and only one case of presence of Corynebacterium diphtheria was observed.

Discussion

The occurrence of acute tonsillitis with respect to population distribution was found to vary differently. Among the reported age groups, maximum tonsillitis cases were observed in the preteen age group (6-12 years) with 62 % followed by teen age groups (13-18 years) 20%,

children (1-5 years) 10% and the least incidence of 8% in more than 18 Yrs.

Similar observations were reported by Middleton et al³ for the age group of 6-12 years. The distribution of tonsillitis was more in male patients (56%) compared to female patients (44%) probably because number of patients admitted were male more than female patients.

The occurrence of symptoms indicated that sore throat was observed in all the patients, fever in 72% and odynophagia in 32% patients. Similar observations for sore throat and fever were reported by Evans and Dick⁴.

The bacteriological studies indicated the occurrence of predominant bacteria β - haemolytic Streptococci (54.00%), followed by coagulase positive Staphylococci (12.0%) and Pneumococci (10.00%) and only one case of presence of Corynebacterium diphtheria was observed. These observations are in line with the earlier reported works of Surrow et al⁵. Acute tonsillitis due to poly bacterial infection was reported by Brook et al⁶.

Conclusions

The bacterial infection is more prevalent in the age group of 6-12 years and β - hemolytic

Streptococci to be the most predominant bacteria responsible for tonsillitis infection.

References

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