



CLINICAL PRACTICE GUIDELINE FOR THE DIAGNOSIS AND MANAGEMENT OF ACUTE PHARYNGITIS AND TONSILITIS AMONG THE PEDIATRIC AGE GROUP

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ABSTRACT

Acute pharyngotonsillitis and Tonsillitis are most frequent health problem global, particular in children, which is most usually associated with benign viral and self-restricting infections. Bacterial pharyngitis is the most important. Major challenge for the clinician is to diagnose group A beta hemolytic streptococcus (GABHS) pharyngitis and diphtheria, which are associated with serious complications nowadays. The present study was conducted to Incidence of acute Pharyngitis and Tonsillitis among the pediatric age group in tertiary care hospital. Total of 100 children aged 1-18 years old and presenting clinical manifestations of acute pharyngotonsillitis were subjected to clinical interviews, physical examinations, and throat swab specimen collection to perform cultures. One hundred cases of acute tonsillitis were selected 56 males and 44 females aged from 2-18 years at random from the patients attending the outpatient Department of family medicine, paediatrics and ENT department. The selected patients have been now not given antibiotics for one week earlier than the take a look at. Limiting antibiotic prescribing to children with a wonderful GABHS check end result is a possible purpose for primary care physicians and an vital step in the direction of really apt use of antibiotics overall.

Keywords: - Acute tonsillitis, β -hemolytic group A streptococcus, Acute pharyngotonsillitis and Palpable tender lymph node

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INTRODUCTION

Acute pharyngitis is a common event accounting for 2–5% of pediatric ambulatory visits, and it is one of the main reasons for prescribing antibiotics in children. It is primarily due to viral infections and frequently sustained by adenovirus, Epstein-Barr virus, or Coxsackievirus. Acute pharyngotonsillitis (APT) is a frequent health problem global, in particular in kids, which is most usually associated with benign viral and self-restricting infections. The most regular manifestation of acute pharyngitis is sore throat. [1] which occurs mainly due to upper respiratory viruses for instance

rhinovirus, coronavirus, and adenovirus. [2] The chief bacterial cause of sore throat the β -hemolytic group A streptococcus (GAS) is the main causative agent, it can lead to severe complications.

Pharyngitis refers to intent indication of inflammation of the pharynx, together with exudates, ulceration, or precise erythema. Redness of the throat may also arise as part of the overall redness of all mucous membranes in a patient with fever.[3] A study of pharyngitis is acceptable most effective while the pharynx is redder than the rest of the oral mucosa.

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Tonsillitis is irritation of tonsils, a common clinical circumstance as a result of either bacteria or viral contamination.⁴ It can arise on occasion or recur often. Visible white streaks of pus characterise acute tonsillitis on tonsils, and the surface of the tonsils may turn out to be vivid crimson shade.⁵ The bacterial tonsillitis is precipitated especially by means of β -haemolytic Streptococcus and different micro organism. The greater commonplace symptoms of tonsils are a sore throat, red swollen tonsils, ache while swallowing, fever, cough, headache, tiredness, chills, swollen lymph nodes inside the neck and ache inside the ears or neck and encompass nausea, stomach ache, vomiting, furry tongue, terrible breath, and trade in voice and trouble in opening of mouth.

According to estimates through the World Health Organization, approximately 600 million new cases of symptomatic APT because of GAS arise annually in children international. Of these, approximately 500,000 develop RF, and approximately broaden three hundred, 000 RC. Most of those instances occur in less developed countries, with three instances better prevalence of RF in those countries, which includes Latin America, than in advanced countries.⁶ While established acute tonsillitis, bacterial pathogens and their antibiotics sensitivity that might indicate the most desirable line of treatment and save you the headaches of acute tonsillitis and avoids unnecessary surgical remedy.⁷ The aim of this study is to Incidence of acute Pharyngitis and Tonsilitis among the pediatric age group in tertiary care hospital.

MATERIAL AND METHODS

One hundred instances of acute tonsillitis had been decided on 56 adult males and 44 female elderly

RESULTS

Table 1 Age wise distribution

S.no	Ages	No of cases	percentage
1	2-5 years	18	18%
2	6-8years	52	52%
3	9-12years	30	30%

Table 1 shown the occurrence of acute pharyngitis and tonsillitis concerning population distribution was established to vary differently. Amongst the reported age groups, maximum tonsillitis cases were

from 4-18 years at random from the sufferers attending the outpatient Department of family remedy, paediatrics and ENT at some point of a length of three hundred and sixty five days from July 2021 to December 2021; every decided on case has been studied as in keeping with the same old techniques. The selected patients had been not given antibiotics for one week before the have a look at. Ethical approval was obtained from research ethics committee of Sree Balaji Medical College and Hospital Chrompet, Chennai and dad and mom of all kids gave informed written consent earlier than the observe. The laboratory studies have been completed in the Department of Microbiology.

Specimens, one from the tonsillar surface and any other from the cryptamagna have been accrued by way of the use of sterile cotton swabs, positioned in sterile bottles aseptically, added to the laboratory and subjected for direct microscopic examination of the pathogens observed through the isolation of the causal marketers on one of a kind media viz., sheep blood agar, chocolate agar, Mc Conkey agar and so on. The antibiotic sensitivity checks were achieved for all the remoted organisms. First and 2d e Antibiotics disc (penicillin, erythromycin, ampicillin, gentamycin, chloramphenicol, ciprofloxacin, cephalexin, cefotaxime, cefotaxime and amikacin) were located in my view for all of the isolates, and the inhibition pattern became noted. After administering the antibiotics to patients as a remedy to deal with tonsillitis, and after the complete therapy, patients were accompanied up for six months or greater to study any recurrence tonsillitis. The facts collected were analyzed concerning age, sex, profession, socioeconomic reputation, medical manifestations and bacteriological.

observed in the age group 6-8years with 52% followed preteen age group by 9-12 years groups 30%, children (2-5 years) 18%.

Table 2: socioeconomic status of patients

S.no	Incoming	No of cases	Percentage
1	Low income group	59	59%
2	Middle income group	25	25%
3	Hi income	12	12%

Table 2 shows the division of acute pharyngitis and tonsillitis was more in males patients (56%) compared to female patients (44%). As for as socioeconomic condition concerned, 59% of cases were

observed in a low-income group, 25% in middle-income group and followed by lowest occurrence of 12% in a high-income group.

Table 3: The professional distribution of patients

S.no	Sex	No. of cases	percentage
1	students	69	69%
2	Homemakers	16	16%
3	labobuers	06	6%
4	Preschool children	09	9%

Table 3 shown the incidence of the disease about different occupations, it was noted that lower in 6% labourers and 9% preschool children and 16%

homemakers. Maximum cases 69% of the patients belonged to the student group.

Table 4: Symptoms of Patients

S.no	symptoms	No. of cases	percentage
1	A sore throat	100	100%
2	Fever	59	59%
3	Odynophagia	35	35%
4	Constitutional symptoms	46	46%

Table 4 shown the incident of symptoms indicated that a sore throat was practical in all the

patients, fever in 59%, odynophagia in 35% and constitutional symptoms in 46% of the patients.

Table 5 signs of patients

S.no	signs	No. of cases	percentage
1	Acute parenchymatous	56	56%
2	Acute follicular	49	49%
3	Acute membranous	12	12%
4	Palpable tender lymph node	69	69%

In Table 5 it was also observed that palpable tender digastrics lymph node was observed in 69% of the cases studied 56% of the patients exhibited acute

parenchymatous tonsillitis signs, 49% acute follicular signs and acute membranous tonsillitis 12% of the patients observed.

Table 6: Bacterial pathogens isolated from patients

S.no	Bacteria isolated	No. of cases	percentage
1	Pathogens	76	76%
2	Commensals	15	15%
3	No growth	19	19%
4	Gram +ve bacteria	65	65%
5	Gram -ve bacteria	20	20%

Table 6 shown the bacteriological study of the throat swabs showed that 12% had commensals and however, no growth of bacteria was observed in 19% of the samples even after 48 h incubation on culture media.

Amid the bacteria isolated, 65% belonged to Gram-positive group and only 20% belonged to Gram-negative group with 76% of the cases had pathogens,

Table 7: Bacterial isolates in acute Pharyngitis and Tonsillities

S.no	Bacteria isolated	No of cases of Pharyngitis	percentage	No of cases of tonsillities	percentage
1	Pneumococci	10	10%	9	9%
2	Coagulase+ve Staphylococci	5	5%	6	6%
3	<i>b</i> -hemolytic Streptococci	49	49%	54	54%
4	Pseudomonas & Klebsiella	7	7%	4	4%
5	Klebsiella & Streptococcus pyogens	9	9%	8	8%
6	Pseudomonas & Klebsiella	6	6%	3	3%
7	Pneumococci & <i>a</i> -haemolytic Streptococci	8	8%	10	10%
8	Corynebacterium diphtheria	2	2%	1	1%
9	Coagulase +ve Staphylococci & Pneumococci	4	4%	5	5%

In Table 7 the culture and sensitivity studies indicated the occurrence of predominant bacteria *b*-haemolytic Streptococci (49%), followed by Pneumococci (10%) and only two case of presence of Corynebacterium diphtheria was observed in patient with pharyngitis. In the tonsillities bacteria *b*-haemolytic Streptococci (54%), followed by coagulase positive Staphylococci (12.5%) and Pneumococci (9.7%) and only one case of presence of Corynebacterium diphtheria was observed concerning monobacterial and polybacterial infections, it was observed that monobacterial infections caused 76.4% of acute tonsillitis as against polybacterial infections of 23.6%. Where both Coagulase positive Staphylococci and Pneumococci were observed in 10% cases, and Klebsiella and Streptococcus pyogens were observed in 8% cases, and Pseudomonas sp was found to cause tonsillar infection along with Klebsiella in two cases.

Sensitivity of isolated bacteria to different antibiotics and chemotherapeutic drugs indicated that Gram positive bacteria were more susceptible to penicillin, erythromycin, ampicillin, gentamycin, chloramphenicol, ciprofloxacin, cephalexin, cefotaxime, cefotaxime and amikacin. Some Gram negative bacteria resistance was observed to penicillin, ampicillin and Chloramphenicol.

DISCUSSION

Acute pharyngitis is one of the main reasons for referring to a pediatric outpatient clinic, and it is one of the main reasons for prescribing antibiotics in children. It is mainly of viral origin and only in one child out of four it is sustained by group A β -haemolytic Streptococcus (GABHS) infection. The diagnosis and treatment of GABHS pharyngitis are still a matter of debate worldwide.

The amount of acute pharyngitis and tonsillitis relating to people division was found to vary differently. Among the reported age groups, maximum acute

pharyngitis and tonsillitis cases were observed in the age group 6-8years with 52% followed preteen age group by 9-12 years groups 30%, children (2-5 years) 18% this results correlated with Middleton et al. study. [8] In present study more in male patients (56%) compared to female patients (44%) maybe due to admitted were more than female patients. As for as socioeconomic condition concerned, 59% of cases were low-income group in this study. Because of their poverty, poor nourishment, unhygienic condition, illiteracy and improper medical care. The frequency of the disease about different occupations, it was noted that 69% of the patients, maximum cases belonged to the student group due to cross infection because of overcrowded classrooms and poor ventilation of the classrooms and low immunity in the children.

In present study specify that a sore throat was noticed in all the patients, fever in 59%, which is correlated with Evans and Dick [2, 9] observations for a sore throat and fever. [10] Study palpable tender digastrics lymph node was observed in 70% of the cases studied. These observations are comparable to the findings of present study.

The bacteriological studies indicated the occurrence of predominant bacteria *b*-haemolytic Streptococci (49%), followed by Pneumococci (10%) and coagulase positive Staphylococci (5%) and only two cases of presence of Corynebacterium diphtheria was observed this results similar reported with Surov et al. [11] Some studies were reported that Acute tonsillitis due to poly bacterial infection [12, 13] which is correlated with our study, Where both Klebsiella and Streptococcus pyogens were observed in 9% cases and Pseudomonas sp was found to cause tonsillar infection along with Klebsiella in six cases and Coagulase positive Staphylococci and Pneumococci were observed in 4% cases.

In present study showed that majority of the isolates were susceptible to antibiotics Penicillin,

Erythromycin, Ampicillin, gentamycin, chloramphenicol, ciprofloxacin, cephalexin, cefotaxime, cefotaxime and amikacin which correlated with Krober et al¹⁴. study had shown penicillin to be the most efficient antibiotic to treat tonsillitis caused by bacteria and cefotaxime most efficient drug to treat acute pharyngitis. Drug resistance was shown coagulase positive Staphylococci and along with pseudomonas with klebsiella. The increasing rate of drug resistance in many bacteria could be due to β -lactamase production by the bacteria that cleave the activity of antibiotics and resistance transfer factors that could have taken up by the susceptible strains during the recombination process.

CONCLUSION

In conclusion, we discovered that physicians approved antibiotics much less regularly over time to

children with sore throat. Though, the in particular antibiotic prescribing charge continues to go beyond the expected frequency of GABHS and physicians retain to pick unnecessarily vast-spectrum antibiotics. Preventable antibiotic prescriptions are not benign: they increase the superiority of antibiotic-resistant microorganisms, divulge sufferers to damaging drug activities and increase expenses. Perhaps unique among top breathing tract infections, clinicians have precise, objective standards within the shape of GABHS trying out to guide the antibiotic treatment of kids with sore throat. Limiting antibiotic prescribing to kids with a wonderful GABHS check end result is a possible purpose for primary care physicians and an vital step in the direction of really apt use of antibiotics overall.

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