

INCIDENCE OF MICROBIAL PATHOGENS IN THE
UPPER RESPIRATORY TRACT OF SUBURBAN
SCHOOL CHILDREN BETWEEN 5-9 YEARS OF
AGE

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ABSTRACT

Haemolytic streptococci groups A,C and G, *Corynebacterium diphtheriae*, *Arcanobacterium* (*Corynebacterium*) *haemolyticum*, *Corynebacterium ulcerans*, and *Staphylococcus aureus* are considered as important upper respiratory tract pathogens which are responsible for causing various diseases and can lead to several complications. Streptococcal sore throat is among the most common bacterial infections in childhood and group A streptococci being the cause of majority of the infections.

The carriage rate of microbial pathogens such as group A,C,G streptococci, *Corynebacterium diphtheriae*, *Arcanobacterium* (*Corynebacterium*) *haemolyticum* and potential pathogens such as *Neisseria meningitidis* in the throat were studied in 200 healthy school children between 5-9 years of age.

The effect of host factors such as age, sex, throat and skin infections, socio-economic status, past history of acute glomerulo nephritis and rheumatic fever on the prevalence of the above mentioned organisms were also studied.

The occurrence of beta haemolytic streptococci groups A,C & G, and *Corynebacterium diphtheriae* in impetiginised skin lesions in the study population were also taken into consideration.

The carriage rate of beta- haemolytic streptococci group A isolated out of 200 school-children was 13.5%, group C was 12% and group G was 3%. 85.18% of the group A streptococci isolates were T-typable; T 5/11/12/27/44, T3, T13 and T 3/B 3264 being the prevalent types. 55.55% of the streptococci group A isolates were positive for serum opacity factor. 42% of beta-haemolytic streptococci group C were identified as *Streptococcus equisimilis* and 58% as *Streptococcus zooepidemicus*.

The carriage rate of *Corynebacterium diphtheriae* was found to be 7.5% and 80% of the *Corynebacterium diphtheria* isolates were identified as *gravis* strain and 20% as *mitis* strain. The toxin production was carried out in-vivo and in-vitro and only one isolate from the *gravis* strains were found to be toxigenic whereas none of the *mitis* strains were toxigenic.

Beta-haemolytic streptococci groups A, C & G and *Corynebacterium diphtheriae* was not isolated from the three children with impetiginised skin lesions in the study population.

Arcanobacterium (*Corynebacterium*) *haemolyticum* and *Neisseria meningitidis* were not found to be isolated from this study.