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PREVALENCE OF DENTAL CARIES IN THE SCHOOL-GOING CHILDREN IN RBI STAFF QUADRANT SCHOOL

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ABSTRACT

Aim: The aim of the study is to measure the prevalence of dental caries in school going children.

Objective: This study is to measure the caries prevalence and treatment needs in school children of 5-10 years studying in different primary and high schools in Chennai, India.

Background: Dental caries is a multi-factorial, microbial, infectious, transmissible disease of hard tissues of teeth characterized by the demineralization of inorganic structures and subsequent breakdown of organic structure along with remineralization of the demineralized structures until there is cavitations. The most common influencing factors, such as sticky carbohydrate containing foods, dietary intake of fibrous foods, the presence of fluoride or other micronutrients in diet, sugar intake frequency and oral hygiene maintenance all have to some extent influence over the causation of dental caries. This Study is carried out in children falling under age group of 3-6 years using World health organization criteria (1997) to record prevalence of dental caries.

Results: A total of 200 children were examined, out of which 126 were female and 74 were male. The prevalence of dental caries was 63% among girls and 37% among boys. In all the primary teeth which were examined the highest incidence of dental caries is seen in maxillary left second molar with an average of 4.6 and highest incidence of filled tooth was also in maxillary left second molar with an average of 2.45.

In mandibular quadrant the highest incidence of dental caries was in right second molar with mean average of 4.6 and highest filled tooth was also seen in mandibular right second molar

With average of 2.3 while comparing both the quadrant the highest incidence of dental caries are seen in maxillary left second molar and mandibular right second molar with mean value of 4.6 but highest incidence of caries filled tooth is seen in maxillary left second molar with average of 2.45..

Key Words: Dental caries, Cavity, Filled tooth, Children

INTRODUCTION

The history of diagnosing dental caries began in 1883 by W. D. Miller who found bacterial involvement in caries development. Shafer (1993) defined dental caries as an irreversible microbial disease of the calcified tissues of the teeth, characterized by demineralization of the inorganic portion and destruction of the organic substance of the tooth, which often leads to cavitations (1). Among oral diseases, the dental caries [2, 3] is an important dental public problem in India and is predominantly a disease of childhood. Pain due to dental caries can affect normal food intake and daily activity in the children (4). The caries experience varies greatly among countries and even within small regions of countries. It varies with age, and sex, socioeconomic conditions, ethnicity, diet, medical conditions of the patient, oral hygiene practices, etc., and even within oral cavity all the teeth and surfaces are not equally susceptible to caries(5). In India, only sporadic data regarding dental caries prevalence is available. Most of studies have been localized to a smaller area involving a particular community (6). Voluminous literature exists on the status of dental caries in the Indian population. Despite several attempts to cure caries and prevent the disease, its prevalence has increased over the last couple of decades. These changing trends in the prevalence of dental caries need continuous understanding and

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investigations. Thus epidemiological data (7, 8) plays a vital role in updating recent trends of the disease and treatment needs. The present study was designed to access the prevalence of dental caries in school going children of Reserve bank of India staff quarters school, Chennai, Tamil Nadu in age group of 3-6 years.

MATERIAL AND METHODS

The study was carried out in 200 children studying in reserve bank of Indian staff quarters school in Chennai, Tamil Nadu. The study was completed within a span for 4 months. The children were examined individually in the school premises by one examiner on a simple straight wooden chair using plane mouth mirrors and community periodontal index probe. The examination was done under natural day light and the details were entered using WHO criteria (9). The children were examined for the presence of decay and filled tooth in primary dentition status. The data was collected and statistical analysis was done.

Inclusion Criteria

- School going children of age 3-6 years
- School children belonging to RBI staff quarters, Chennai.

Exclusion Criteria

- Children suffering from systemic illness
- Children who were not willing to participate in the study
- Children with orthodontic brackets and with severe extrinsic stains on their teeth.

RESULT

This is cross-sectional study were 200 children were examined, out of which 126 were female and 74 were male (Graph 1). The prevalence of dental caries was 63% among girls and 37% among boys.

In all the primary teeth which were examined the highest incidence of dental caries in maxillary left second molar with an average of 4.6 and highest incidence of filled tooth was also in maxillary left second molar with an average of 2.45.

In mandibular quadrant the highest incidence of dental caries was in right second molar with mean average of 4.6 and highest filled tooth was also seen in mandibular right second molar with average of 2.3. While comparing both the quadrant the highest incidence of dental caries are seen in maxillary left second molar and mandibular right second molar with mean value of 4.6 but highest incidence of caries filled tooth is seen in maxillary left second molar with average of 2.45.

DISCUSSION

The study concludes that dental caries prevalence in RBI school going children of age 3-6 years is significantly high and overall of 90% children required treatment.

This could be because of negligence or lack of awareness about the importance of primary teeth. The increase in caries would be due to lack of dental awareness, improper brushing techniques, improper dietary habits, ignorance, and lack of motivation. We recommend creating dental awareness by increasing school dental health programs. Awareness to the public may be increased by using audio-visual communications such as radio, televisions, magazines, and public notices. Parents and teachers must be encourages to devote sufficient time for dental health education programs and diet counselling.

CONCLUSION

This study was a cross-sectional study on prevalence of dental caries in children studying in RBI staff quarters, Chennai aged 3-6 years. The study concluded that the highest incidence of dental caries was 63% in girls and 37% in boys. In all the primary teeth which were examined maxillary left and mandibular right second molar showed the highest incidence in dental caries and maxillary left second molar showed highest incidence of filled tooth. Thus it concludes that dental caries incidence is high in RBI school children and 90% children needs treatment.

Healthy teeth and oral tissues and the need for oral health care are important for any section of society and as dentist it is important to promote awareness towards dental caries in children.

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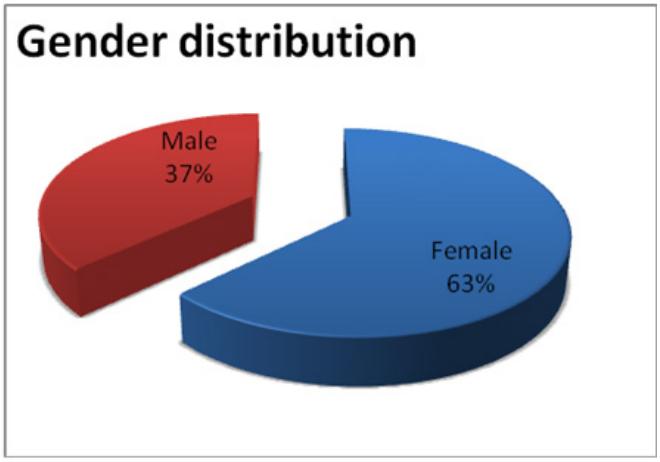
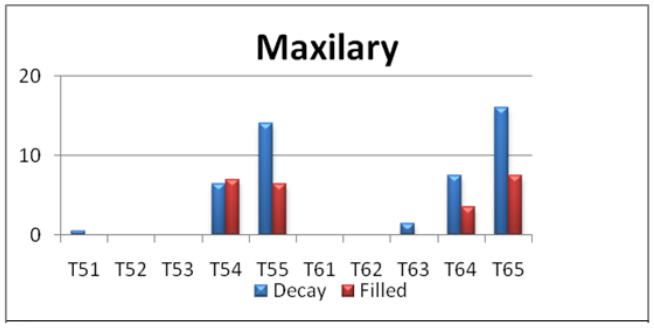
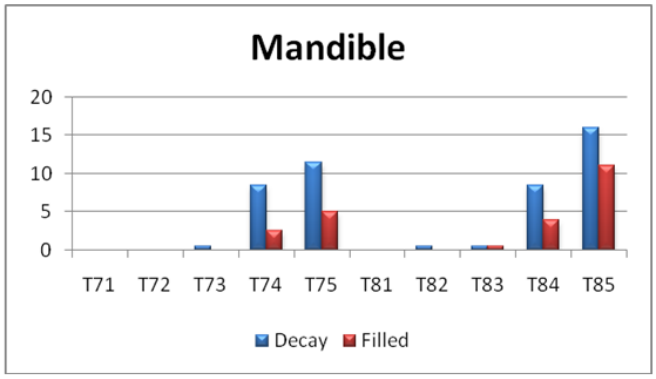


Graph 1: Shows the gender distribution



Graph 2: Shows the Caries and restored teeth in Maxillary arch.



Graph 3: Shows the Caries and restored teeth in Mandibular arch.