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Dental Caries in Children

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Dental caries (DC) is the most common dental problem in children. It begins even before the first year of life(1). By 5 years, 15% of all children have had dental caries. After eruption of permanent teeth, 20% had caries(2). Pediatricians and primary care physicians can prevent dental problems because they see and observe the child earlier.

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The World Health Organization had defined DC as a 'Localised post eruptive pathological process of external origin, involving softening of the hard tooth tissue and proceeding, to the formation of a cavity'(3). No baseline data is available for India in the WHO Global Oral Data Bank(4).

Material and Methods

Five hundred children, selected at random, from the out-patient department were studied. The dental status of children was assessed which included dental hygiene, number of decayed, missing or filled teeth and presence of cavity. History of dietary habits, methods of teeth cleaning, mouth rinsing after food, parents and/or sibling history of dental problems was obtained. Oral hygiene advice was given to the children and parents.

Results

Of 500 children, 287 (57.4%) were male and 213 (42.8%) female. Of these, 161 (32.2%) had dental caries. The prevalence was more in children between 4-12 years of age. The site of caries is shown in *Table I*. Among 161 children with caries, 122 (75.3%) had cavity. Of 500 children, 182 (36.4%) had one or more missing teeth, of which 39 had the tooth extracted for DC and in others, it was physiological tooth loss. Nine (1.8%) had filled teeth. Rampant caries or nursing bottle caries were not seen in any child. History revealed that 67 (41.8%) had dental abscess and 102 (63.3%) had one or more attacks of toothache.

For teeth cleaning, 174 children (34.8%) used sand or ash, 289 (57.8%) tooth powder, 37 (7.4%) tooth brush with

paste and only 16 used flouride containing toothpaste. None of the children brushed at night or rinsed mouth after eating sweets.

Two hundred and seventy six (55.2%) parents (either one or both) had caries and siblings of 203 (40.3%) had caries. Of 161 children with DC, 104 parents (64.59%) and 67 (41.8%) siblings had caries.

TABLE I – *Site of DC in Affected Children*

Site	Number	Percentage
Incisor		
Upper	3	1.9
Lower	6	3.7
Canine		
Upper	2	1.3
Lower	7	4.3
Premolars		
Upper	7	4.3
Lower	46	28.6
Molars		
Upper	19	11.8
Lower	71	44.1
General		
Upper teeth only	25	15.6
Lower teeth only	97	60.2
Both	39	24.2

Discussion

The results reveal that unfavorable diet and oral hygiene make the children between 4-12 years more vulnerable to DC. Contrary to earlier reports(5), males out numbered females in this study.

Lower molars were more susceptible for decay and cavity formation. The anatomical position, structure and the grining function make them prone for destruction. An earlier report(6) correlated well with the anatomical distribution of DC in this study.

Parents were ignorant about basic oral hygiene. Majority of them used only some rough material for cleaning. Tooth cleaning before sleep was not practised. Many did not rinse mouth after eating sweets. Brushing of teeth within 15 minutes of consumption of sweets reduced carious activity(7).

The similar dietary and oral hygiene habits in the family could be the reason for increased incidence of DC in parents and siblings. Possibility of a genetic caries susceptibility in certain families can be explored.

Considering the increased prevalence of DC, regular dental examination in schools, training of primary health care personnel, dental camps for early detection, fluoridation of drinking water, fluoride fortification of edible things, use of flouride mouth washes and dental floss are recommended.

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