

DENTAL CARIES, GINGIVITIS AND ORAL HYGIENE STATUS AMONG 12 YEAR OLD PRIMARY SCHOOL CHILDREN IN ILALA DISTRICT — DAR ES SALAAM

By F. A. MBIRU,
Muhimbili Medical Centre
Assistant Dental Officer
ADO Training MMC 1985/86

ABSTRACT :

A survey was conducted among 200 school children in Ilala district. The average age of the children was 12 years. The schools were chosen from the city centre namely Kisarawe and Mnazi Mmoja Primary Schools.

Prevalence of caries and periodontal conditions was studied. The diagnostic criteria used was criteria and symbols for teaching and services by K. Jensen (1982). Data analysis was done manually.

The findings are compared with previous studies done in 1979 and 1983 by Dr. Mosha. It was found that the prevalence of caries is not increasing and the state of oral hygiene very poor.

INTRODUCTION :

Ilala district has three dental units. One unit is at Mnazi Mmoja Dispensary. This unit gives emergency dental services to patients. Another unit, a mobile unit which is now stationary at Mnazi Mmoja Dispensary, gives dental services to School children. A third unit is at Ilala district hospital. This unit was installed by Muhimbili Medical Centre for teaching purposes. It is also giving emergency treatment services to patients.

According to clinical records from the three clinics there is an increase in number of children attending for dental care. This situation has aroused the interest of the author to study the reason as to why this increase is taking place in Ilala district. The findings of this study will be compared with other done in 1979 and 1983, to see if caries is actually increasing, decreasing or constant.

MATERIAL AND METHOD :

A sample of two hundred pupils was taken for the survey. The average age of the pupils was

12 years. These were taken from two schools which are within a walking distance from Mnazi Mmoja dispensary. All the children had permanent teeth.

Screening was done in a classroom under natural light. The ADO student examining and a dental orderly from Mnazi Mmoja dispensary recording. One hundred pupils were taken from each school, that is 50 girls and 50 boys.

A sickle probe and a mirror were used to detect caries while the pupil was seated on a chair and the examiner on a desk. All surfaces of all teeth were examined and all carious lesions recorded. Lesions that do not involve the pulp were recorded as C, all lesions involving the pulp as Pc, and permanent fillings were recorded as F. Missing teeth due to caries were recorded as C. The diagnostic criteria used for caries was the WHO index (1977).

For periodontal condition no periodontal probes were available so the sickle probe was used.

The diagnostic criteria used was criteria and symbols for teaching and services by K. Jensen (1982). Six teeth were examined, three upper teeth, that is 16, 21 and 24, and three lower teeth 36, 41 and 44. Two surfaces of each of these teeth were examined i.e. the buccal and mesial or the lingual and mesial surfaces. All soft deposits visible by the eye were recorded as 2, soft deposits detected by the probe as 1, and where there are no soft deposits it was recorded as 0.

For calculus, the supra gingival calculus was recorded 1 subgingival calculus 2, and where there was both supra and subgingival calculus it was recorded 3 and 0 where there was no calculus. Gingival bleeding was recorded as 1 and 0 where there was no bleeding.

Dettol was used for cold sterilization of instruments. Data analysis and calculations were done manually.

RESULTS :

Periodontal Condition:

After the survey it was noted that the scores for plaque were very high in both schools and sex. In Kisarawe Primary School (table 1), the percentage distribution of surfaces with plaque for girls was 99.1% and for boys 99%. For Mnazi Mmoja Primary School (table 2), the distribution of surfaces with plaque for girls was 90% and 85% for boys. For calculus the score for girls was 34.3% and for boys 30.8% in Kisarawe Primary School (table 1). In Mnazi Mmoja Primary School the scores for calculus was 39.1% for girls and 52.7% for boys (table 2). In general the oral hygiene is poor.

Table 1:

Percentage distribution of surfaces with plaque, calculus and gingivitis for both sex in Kisarawe Primary School.

	Total Score Girls	% Distribution Girls	Total Score Boys	% Distribution Boys	% Distribution Both
Plaque	595	99.1%	594	99 %	99.1%
Calculus	20.7	34.3	185	30.8	32.5
Gingivitis	120	20	95	15.8	17.9

Table 2:

Percentage distribution of surfaces with plaque, calculus and gingivitis for both sex in Mnazi Mmoja Primary School.

	Total Score Girls	% Distribution Girls	Total Score Boys	% Distribution Boys	% Distribution Both
Plaque	540	90 %	510	85 %	87.5%
Calculus	238	39.1	316	52.6	47
Gingivitis	145	24.1	161	27	25.5

CARIES :

The scores for caries are quite low (table 3), but there is difference between boys' and girls' scores (table 4). The score for girls in Mnazi Mmoja Primary School is almost twice the score for boys (table 4). Only one pupil was found with a permanent filling. However most fillings were of temporary material and thus recorded as carious.

The average number of sound teeth is 27.9 for Kisarawe Primary School and 25.9 for Mnazi Mmoja Primary School. The average DMFT for Kisarawe is 0.49 (table 3) and for Mnazi Mmoja is 0.47 (table 4).

Table 3:

Average distribution of caries and its components among 12 year olds in Kisarawe Primary School.

	C	Pc	M	F	DMFT	Sound Teeth
Girls	0.4	0.12	0.06	0.02	0.6	27.06
Boys	0.26	0.02	0.01	0.0	0.38	27.32
Both	0.33	0.07	0.03	0.01	0.49	27.19

Table 4:

Average scores of caries and its components among 12 year olds in Mnazi Mmoja Primary School.

	C	Pc	M	F	DMFT	Sound Teeth
Girls	0.48	0.04	0.1	0	0.62	24.78
Boys	0.16	0.08	0.08	0	0.32	26.94
Both	0.32	0.06	0.09	0	0.47	25.86

The percentage of children affected by caries in Kisarawe Primary School is 20% boys, 22% girls and 21% both boys and girls.

In Mnazi Mmoja Primary School 26% had caries, 34% being girls and 18% boys. The caries free children in Kisarawe Primary School is 79% and in Mnazi Mmoja Primary School is 74%.

Discussion :

The survey shows there is a low caries prevalence among 12 year olds in the district (table 3 and 4). The prevalence is slightly higher in girls than in boys. This low caries prevalence contrasts with clinical records which indicate higher levels of caries prevalence among school children. The high prevalence recorded may be due to growth in population in Dar es Salaam. The population is increasing at a faster rate than the dental services; thus a higher attendance at the dental clinics.

Secondly, people these days are becoming more aware of availability of dental services. Parents are bringing their children early for check up and treatment, as compared to before when people thought a dental clinic was a place for extraction of teeth only.

Thirdly, other health allied personnel like nurses and first aid teachers in the schools, check

the pupils, and advise parents to send their children early for treatment whenever they are diagnosed with a dental problem. All these factors may have contributed to the increase observed in the three dental clinics.

When the findings are compared with studies done earlier in the same district (Mosha 1979 and 1983), the prevalence of caries is not increasing. The average DMFT of the whole sample was found to be 0.48 in this study, while in studies done in 1983 it was 0.67.

It can therefore be concluded that there is no rapid increase in the prevalence of dental caries in Ilala district.

The periodontal condition indicates a poor oral hygiene. The percentage score for plaque for the whole sample was 93%. The score for calculus was 39.5%. However there was no irreparable damage observed. It is hoped after treatment and oral hygiene instructions the condition will improve.

BIBLIOGRAPHY :

1. Mosha H. J., Dental caries, gingivitis and oral hygiene among school children in Dar es Salaam, Tanzania. Preliminary Report on Oral Surveys 1970 and 1983.

One good school master is worth a thousand priests.
— Robert G. Ingersoll

I have but one request to ask at my departure from this world — it is the charity of silence. Let there be no inscription on my tomb. Let no man write my epitaph.
— Robert Emmet

From time immemorial it has been repeated, with hypocrisy, that men are equal, and from time immemorial the most degrading and the most monstrous inequality ceaselessly weighs on the human race.
— Francois Emile

Pray as if everything depended on God, and work as if everything depended upon man.
— Francis Spellman

A proverb is a short sentence based on long experience.

Bill Moyers, who was an ordained Baptist Minister, during the time he was President Johnson's press secretary, was saying grace at a White House dinner one evening. Johnson was seated at the other end of the table and was having trouble hearing. "Speak up", he said, "I can't hear you".

"I wasn't talking to you", replied Moyers.

Failure should be our teacher, not our undertaker... Failure is delay, not defeat... It is temporary detour, not a dead-end street.
— William Ward

What we learn from the past is that we seldom learn from the past.

MATURITY BEGINS when we're content to feel we're right about something, without feeling the necessity to prove someone else wrong.