

Study regarding the oral health in children from the Constanta city School for the disabled

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Summary

The aim of this paper is to investigate children of the Constanta School for the disabled and to ascertain the diseases encountered as well as the possible correlation with their handicap, along with the possibility of implementing certain oral health programs, carried out by the help of Dental Medicine students during the preventive and community dentistry clinical practices.

259 children aged 6 to 18 years old are registered in Constanta School for the disabled. Our study comprised a batch of children from grades I-IV, who are also subjected to oral rinses with fluoridated solution. 87 boys and girls aged 7-14 years old were examined according to a special clinical record. Our results show that the first place is taken by children with medium mental disability (50%), the second by children with slight mental disability (29%) and the last by those with severe mental disability (21%). Our data are similar to those in the literature, in which dental caries take the first place regarding the frequency. Thus, simple and complicated decay in temporary teeth is 40%, while in permanent teeth, it rises to 45%.

Taking into account the specificity of the study batch and comparing our clinical data with those of other authors, made on normal children, we can state that the percentage of all diseases is much higher in disabled children, fact that triggers the need of applying oral prevention programs and individualized curative treatment methods in these patients.

Introduction

Desiring to underline the experience of other European countries, which put dental prevention on the first place in the field of public health care services, we carried out a study on the children of Constanta School for the disabled, comprising 259 children aged 6-18 years old. Our study aimed at finding out what was the oral health status of disabled children and if there was any connection between the mental disability and dental diseases.

Some of the children are boarders and some are out of location, and show different degrees of mental disability, such as slight, medium and severe. Some of them show associated neurologic disability, aggressiveness and other psychotic disorders. The school is equipped with medical office and medical staff (physician, medical assistants, nurses); medical assistants are in charge with the administration of basic therapy.

Children undergo psycho-therapeutic treatment, with a psychologist and also logopedics, according to their disorder.

We need to specify that all teachers have psychology studies and take active care of the children.

Unfortunately, the school does not ensure dental care, as it does not possess the specific equipment. We mention that these children are comprised in the 20,000 children of Constanta county, who benefit by the program of caries prevention by oral rinses with fluoridated solution Fluorostom, program carried out for 3 years ago, by the Dental Medicine Faculty of Constanta.

Objectives

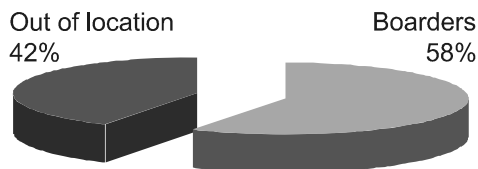
Our study aim as assessing the oro-dental health status of disabled children, and making correlations with their handicap, revealing thus the need of implementing individualized prevention programs.

Material and method

259 children aged 6 to 18 are registered in the School for the disabled. Our study comprises the children of grades I-IV, who are subjected to oral rinses with fluoridated solution. 87 boys and girls aged 7-14 years old were examined according to a special clinical record. The majority are boarders and showing medium disability but there are also children with severe and slight disability.

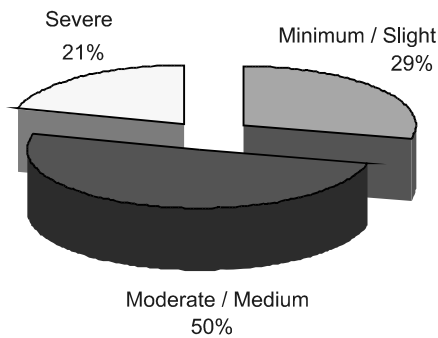
Results

LOCATION



Out of 77 examined children, aged 7-14 years old, grades I-IV, the majority are boarders (45 children, representing 58%) and 32 are out of location (42%), living with their parents or relatives.

MENTAL DISABILITY



All children of the School for the disabled suffer from various psychological disorders, predominantly from mental disability. Medium mental disability affects 50% of the studied batch. The distribution in the study batch is:

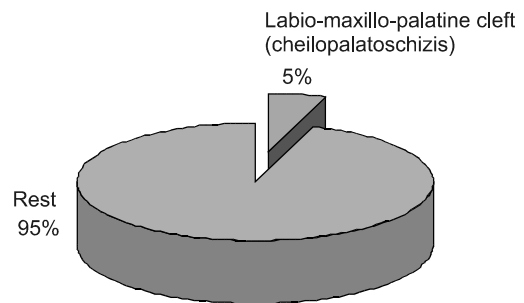
- 22 children showed minimum/slight mental disability (29%), being cooperative, allowing a dental examination in optimal conditions;
- 39 children showed medium/moderate mental disability (50%), being less cooperative,

the dental examination being performed more difficult;

- 16 children showed severe mental disability (21%), the dental examination being extremely difficult to perform, needing sometimes the help of the dental assistants.

Our results show that the first place is taken by children with medium mental disability, the second by children with slight mental disability and the last by those with severe mental disability. Our data concord with literature studies made in communities of mentally disabled patients.

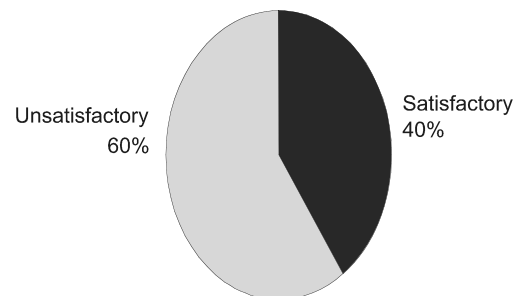
DOWN SYNDROME



Out of 77 children examined, 5 suffer from Down syndrome, and 4 underwent surgery for cheilo-palato-schizis. These diseases have a genetical basis and are related to psychic disorders. Down syndrome patients present major phenotypical changes, especially in their facies and dento-maxillary system.

Patients with cheilo-palato-schizis show major changes in the dento-maxillary system, negatively influencing its development, the eruption and functioning of teeth. These patients show eruption disturbances, changes in teeth position, partial anodontia and odontal and periodontal complications.

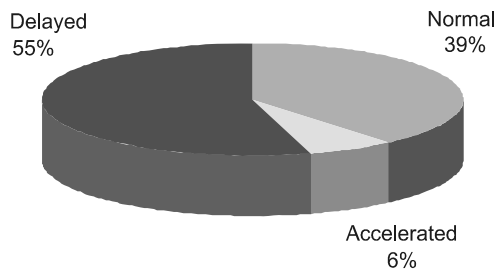
DENTAL HYGIENE



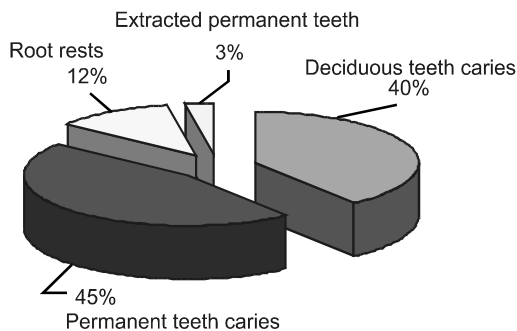
We assessed also the oral hygiene status, a very important element for the oral health status.

We ascertained that oral hygiene in disabled children was poor. 60% of the children, especially those with moderate and severe mental disability showed unsatisfactory oral hygiene, with massive scale deposits and dental plaque, a great part of them being unable to perform toothbrushing and even oral rinses; 40% of children showed satisfactory oral hygiene, brushing their teeth once a day.

DENTAL ERUPTION



Analyzing dental eruption in the 77 batch children, we noticed that 5 children (6%) presented accelerated eruption; 30 children (39%) - normal dental eruption; 42 children (55%) - delayed dental eruption. Concluding, delayed dental eruption takes the first place, being followed statistically far by normal eruption and accelerated eruption.



The dental examination of the 77 children revealed:

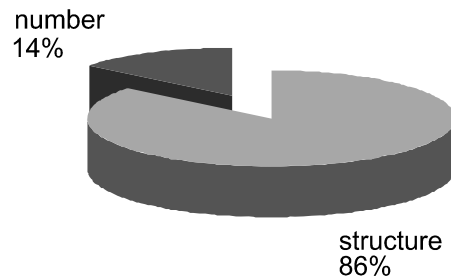
- 74 temporary teeth decays;
- 85 permanent teeth caries;
- 22 root rests;
- 5 extracted permanent teeth.

Our data are similar to those in the literature, in which dental caries take the first place regarding the frequency. Thus, simple and complicated decay in temporary teeth is 40%, while

in permanent teeth, it rises to 45%. The correlation between the two percentages is explained by the fact that the children examined show mixt dentition.

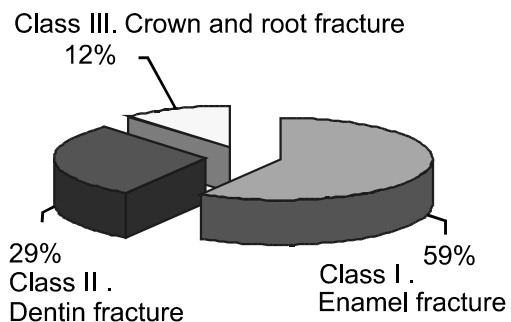
Next place is taken by the complicated decay of temporary and permanent teeth, and the last place by the extraction of permanent teeth (predominantly the first permanent molar).

DYSTROPHIES



16 patients out of 77 (20%) show dystrophy. We noticed 2 number dystrophies (14%), represented by lateral incisor anodontia and supernumerary tooth (mesiodens) and 12 structure dystrophies (86%), represented by amelogenesis imperfecta and dentinogenesis imperfecta.

DENTAL FRACTURES



Due to the mental disabilities, these children present a higher percentage of dental fractures (59%): 5 dentin fractures, without pulp exposing (29%) and 2 crown and root fractures (12%). Taking into consideration Parkin's classification, first place is taken by class 0 fractures, the second by class I and the third by class III.

Conclusions

1. The majority of examined subjects show moderate mental disability (50%), followed by

those with minimum/slight mental disability (29%) and severe mental disability (21%).

2. Oral hygiene, marker of the oral health status is closely related to the socio-economical status and mental health condition of the patient, resulting in poor oral and even general hygiene (60%).

4. Regarding the correlation between mental disability and age of eruption, we noticed a high percentage of delayed eruption (55%), also existing some cases of accelerated eruption (6%).

5. As regards the oral pathology in the study batch, the percentage of dental decay and its complications is high (45% in permanent teeth and 40% in deciduous teeth), followed far by dental dystrophies (20%) and periodontal diseases.

6. Mental disability is often a cause of dental fractures. Our data underline this aspect, the percentage of dental fractures in the study batch being 21%, compared to normal children.

7. The percentage of complicated caries in young permanent teeth is high, resulting in root rests and extractions, mainly in first permanent molar.

8. Taking into consideration the specificity of the study batch and comparing our results with those of other authors, made on normal children and with our previous studies regarding the values of dmft (5.12), dmfs (9.77), DMFT (4.46) and DMFS (7.03) indices, we can state that the percentage of all diseases is much higher in disabled children, fact that triggers the need of applying oral prevention programs and individualized curative treatment methods in these patients.

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