



Assessment of dental restoration features in incomplete amelogenesis

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Abstract

Imperfect amelogenesis (NA) is a hereditary disease associated with impaired enamel development. Clinically, it manifests as increased sensitivity, pathological erosion, decreased bite height, and often is complicated by caries. Patients suffer from aesthetic deficiencies, which sometimes lead to psychological trauma.

Introduction

Type of NA inheritance: autosomal dominant, autosomal recessive, and X-linked. Forms of NA: hypoplastic, hypomaturation, hypocalcification, and NA combined with taurodontism. Stages of NA development: temporary phase (during temporary and mixed occlusion), transitional phase (after permanent teeth emergence and until puberty), permanent phase (after puberty) Purpose of the study: to study the course of this disease and develop a treatment plan for patients with this syndrome. The goal of treating this pathology is to eliminate the aesthetic and functional defect.

Methods and Materials

For the study, 7 patients (3 boys and 4 girls) aged 4 to 17 years were selected. In 5 patients, the presence of similar enamel developmental defects in family members was confirmed. In 4/12 patients, the hypoplastic form of NA was diagnosed, in 2/12 patients, hypomaturation was noted, and in 1/12 patients, hypocalcification was diagnosed.

Complaints: hyperesthesia and aesthetic dissatisfaction.

Active caries was observed in 4 patients. Gingivitis was noted in most patients. 5 patients were diagnosed with non-enamel-related dental anomalies.

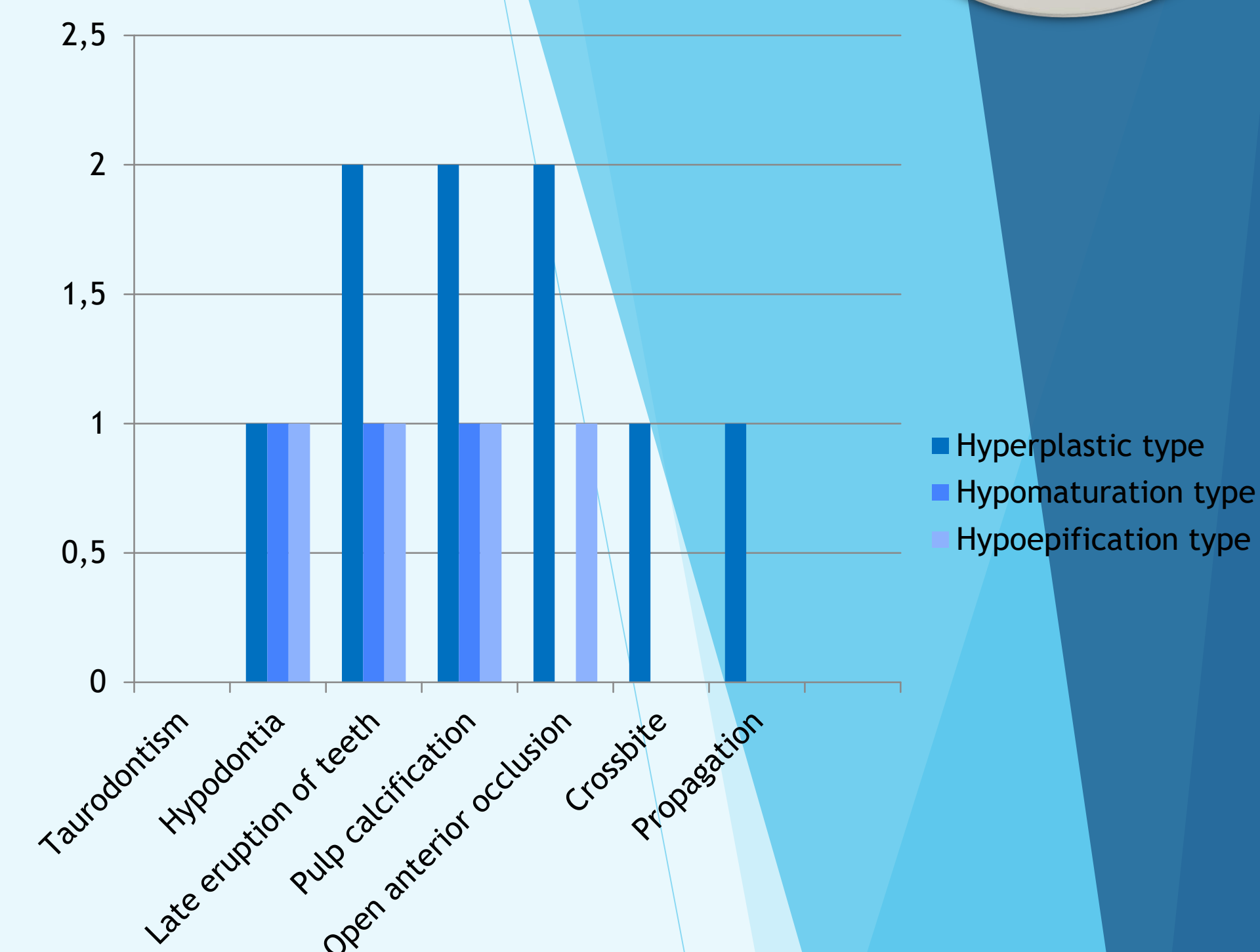
Treatment stages: 1st stage - remineralizing therapy; 2nd stage - filling with SICs and composites; 3rd stage - orthopedic and orthopedic treatment.

Results and discussion

The study of the research results lasted from 2 to 11 years. All patients were summoned for re-examination every three months. Throughout this time, the frequency of caries development in patients remained low, and they were all satisfied with the treatment.

Table 1. Distribution of NA types in a selected group of patients with this disorder

	Hyperplastic (n=4)	Hypomaturati on(n=2)	Hypokalsificat ion(n=1)
Taurodontism	-	-	-
Hypodontia	1	-	1
Late eruption of teeth	2	1	1
Pulp calcification	2	1	1
Open anterior occlusion	2	1	1
Crossbite	1	-	-
Propagation	1	-	-



Conclusion

Imperfect amelogenesis requires complex treatment. Also, when planning treatment, the age of patients, the type and severity of the disease, and the condition of the patient's oral cavity should be taken into account. Preventive measures, early diagnosis, and timely treatment are of great importance for improving the oral health of patients suffering from incomplete amelogenesis.

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Figure 1. Image of the oral cavity of a patient suffering from amelogenesis imperfecta and demonstrating high carious activity.



Fig. 2. Hypoplastic form