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ASSESSMENT OF THE EFFECT OF DENTAL PROSTHESES USED IN CHILDREN WITH DENTAL ARCH DEFECTS ON THE ORAL TISSUES AND ORGANS

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Dental arch defects in children are formed under the influence of various etiological factors (trauma, caries, hereditary and congenital anomalies). This condition leads to impaired masticatory, speech, and esthetic functions and requires a comprehensive orthopedic and orthodontic approach (Proffit et al., 2018; Nigmatova I.M., Nigmatov R.N., 2021). When the defects of the dental arch are restored using fixed and removable prostheses, they exert a certain influence on the oral tissues and organs (Abdurashidov & Mamatqulov, 2019).

Material and Methods. A total of 76 children in the mixed dentition stage were included in the clinical study. Their mean age was 7–12 years. Distribution by gender was as follows: 41 girls (53.9%) and 35 boys (46.1%). All patients had diagnosed dental arch defects and were provided with appropriate prosthetic constructions (removable and semi-removable types). The studies have shown that prostheses used in children may cause morpho-histological changes in the oral mucosa, initiate functional adaptation processes in gingival and periodontal tissues, and positively influence speech, mastication, and the activity of the maxillofacial muscles. At the same time, during the adaptation period, phenomena such as aseptic inflammation, hyperemia, or discomfort may occur.Proper selection of prosthetic construction and adherence to individual oral hygiene rules minimize adverse tissue changes. Furthermore, orthopedic appliances applied in childhood not only restore chewing, speech, and esthetic functions but also have a scientifically

substantiated positive impact on the physiological development of the dentoalveolar system.

Results obtained:

1. In girls, adaptation to prostheses occurred faster; however, mucosal reactivity was relatively higher, with more frequent cases of hyperemia.
2. In boys, adaptation to prosthetic constructions proceeded more slowly, but fewer inflammatory signs were observed.
3. In all groups, after prosthetic treatment, positive dynamics were noted in speech, masticatory function, and esthetic indicators.
4. Regardless of gender, morpho-functional adaptation of the gingival tissues and oral mucosa stabilized within 2–3 weeks.

Conclusion:

In prosthetic treatment of children with dental arch defects, it is essential to thoroughly study the morpho-functional changes of the oral tissues and organs, to select orthopedic constructions individually, and to carry out periodic monitoring. This increases the effectiveness of rehabilitation and improves children's quality of life. In the studied 76 children with mixed dentition, gender-related differences in adaptation were observed: in girls, faster but more reactive responses were noted, while in boys adaptation was slower but more stable. These aspects should be considered in the selection of prosthetic constructions and in the planning of rehabilitation measures.

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