

*Letter to the editor***TIPS AND ADVICES WHEN PLANNING AND CONDUCTING THE PROSTHODONTIC TREATMENT IN PEDIATRIC PATIENTS****ПРЕПОРАКИ ПРИ ПЛАНИРАЊЕТО И СПРОВЕДУВАЊЕТО НА ПРОТЕТИЧКИ ТРЕТМАН КАЈ ПАЦИЕНТИ ВО ДЕТСКА ВОЗРАСТ****Bajraktarova Valjakova E.^{1*}, Korunoska Stevkovska V.¹, Sotirovska Ivkovska A.², Bajraktarova Misevska C.³, Elenchevski S.¹, Georgieva S.⁴, Ivanovski K.⁴**

¹Department of Prosthodontics, Faculty of Dentistry, University “Ss Cyril and Methodius” – Skopje, University Dental Clinical Center “St. Panteleimon”, Skopje, ²Department of Pediatric and Preventive Dentistry, Faculty of Dentistry, University “Ss Cyril and Methodius” – Skopje, University Dental Clinical Center “St. Panteleimon”, Skopje, ³Department of Orthodontics, Faculty of Dentistry, University “Ss Cyril and Methodius” – Skopje, University Dental Clinical Center “St. PanteleimonPanteleimon”, Skopje, ⁴Department of Oral and Periodontal Diseases, Faculty of Dentistry, University “Ss Cyril and Methodius” – Skopje, University Dental Clinical Center “St. Panteleimon”, Skopje

Respected Editor, respected colleagues,

Sometimes during the practice, the specialist for prosthodontics has a patient who is a child. There are several reasons for prosthetic treatment at this age group such as loss of a large amount of tooth substance or tooth extraction due to trauma or inadequate maintenance of oral hygiene, both in children with normal development and in those with developmental disabilities. Children with hypodontia or developmental anomalies of the teeth, and children with syndromes in whom the agenesis of some teeth is one of the symptoms are our patients as well. Considering the challenges we encounter when planning and implementing therapy in the youngest patients, in cooperation with colleagues from other specialties, the idea to share the gained experiences with you was imposed. We hope that the following tips and short advices will help you in providing prosthetic therapy in patients whose smile brings the greatest joy.

Почитуван уредник, почитувани колеги,

Во текот на работниот стаж на специјалистот по стоматолошка протетика, не ретко се случува пациентот да биде дете. Причини за протетички третман кај пациентите од оваа возрастна популација можат да бидат губење на голема количина на забна супстанца или предвремена екстракција на забите поради траума или несоодветно одржување на орална хигиена, како кај деца со нормален развој, така и кај оние со попреченост во развојот. Честопати наши пациенти се и деца со хиподонција или развојни аномалии на забите, како и оние со различни синдроми, кај кои агенезата на некои заби е една од карактеристиките. Тргувајќи од предизвиците со кои се среќаваме при планирањето и спроведувањето на терапијата кај најмладите пациенти, а во консултација со колегите од другите специјалности, се наметна идејата стекнатите искуства да ги споделиме со вас. Се надеваме дека овие кратки совети ќе ви помогнат при спроведувањето на протетичката терапија кај пациентите чија насмевка најмногу радува.

Tips and advices when planning and conducting the prosthodontic treatment in pediatric patients**Communication:**

1. Establish a friendly relationship with the pediatric patient based on mutual respect, trust, and love;

2. However, maintain your authority.
3. Assess the child’s character and communicate accordingly.
4. Children’s age, maturity, and developmental level matter!
 - with little children, try to be silly;
 - with school-age kids, find some common ground, like a cartoon character or TV show;

- when treating teenagers, you should talk with them with the same respect as with an adult person.
5. If they find you intimidating, remove the white coat and take a few steps back¹;
 6. Try to get close later on.
 7. Adjust the way you communicate, using terms the child will understand.
 8. When having an appointment with a pediatric patient, be positive, patient, and smile.

Planning the prosthodontics treatment:

1. Talk about the dental status with the child and explain the aim of the therapy, as follows:
 - what kind of prosthetic appliance should be manufactured,
 - the functions of the orofacial system which will be established.
2. Emphasize the aesthetic aspect of the appliance!
3. Explain the therapeutic procedures (without going into unnecessary details) and most of the materials you will use.
4. Be honest with the patient about the possible pain or other uncomfortable sensations that may occur during the therapy.

Appointment schedule and recommendations:

1. Assess the health status of the child for each appointment separately:
 - the patient needs to be in optimal health condition,
 - without symptoms of any acute and/or infectious diseases,
 - with passable upper respiratory tract,
 - without gastrointestinal disorders.
2. If there are two pediatric patients with the same or similar dental status requiring the same type of prosthetic appliance, do all the procedures on the older child first, in front of the younger child (you should gain a permission from the parents first).
3. Schedule the appointment in the morning, when the child is most rested, after a peaceful night with quality sleep².
4. The child should not have breakfast before the therapeutic phases in which the posterior parts of the oral cavity might be irritated (e.g. taking pre-

liminary or functional impressions).

5. Having an easily digestible meal is recommended before starting with all other treatment procedures.

Therapeutic procedure:

1. The therapeutic procedures should be carried out quickly, but carefully.
2. In cases when the procedure takes a longer period, and the child loses its attention and patience, give the child a short break or divide the procedure into two appointments (as long as it does not affect the quality of the prosthetic appliance).
3. If it is safe, allow the child to touch the instruments and materials you will work with.
4. Allow the child to choose the material you will use (e.g. the color of the impression material), but only if it does not disrupt the final quality of the prostheses.
5. Choose the materials that are most suitable for children²:
 - fast-setting irreversible hydrocolloid impression materials,
 - medium/high viscosity silicone impression materials,
 - thermoplastic materials that are optimally moldable when heated on a lower temperature.
6. Use a suitable technique while taking an impression to complete the procedure easier and safer:
 - select an impression tray according to the dental arch size;
 - fill the tray with an optimal amount of impression material, up to the tray borders;
 - put pressure over the posterior part of the tray, and after that over the frontal part, so the excess of the impression material, could flow in the vestibulum, not pharyngeal.
7. When making mobile dentures, just before taking the functional impressions, show all the movements with the lips, cheeks, and tongue to the child and ask him/her to imitate; practice the movements several times with an empty tray in the mouth only. During the impression-taking procedure, continue to show the required facial muscles' movements.
8. Verbally praise and symbolically reward the child at the end of each appointment, for his/hers patience and successfully completed working phase.

Pay attention please:

I. When making crowns³:

1. Crowns may be made for children of all ages.
2. However, if you are making a crown on the second primary molar:
 - pay attention to the convexity of the distal surface;
 - the artificial crown must not interfere with the normal eruption of the first permanent molar!
3. When preparing immature permanent teeth, remove as minimal of the tooth substance as possible to preserve the pulp vitality⁴ as:
 - the coronary pulp is voluminous,
 - the dentin canals are wide.

II. When making a dental bridge:

1. You may plan a dental bridge as a treatment of choice, after complete development of the jaws.
2. You are allowed to make a dental bridge at a younger age (not before 8 years of age), only if it is located in the frontal part of the mandible!
3. Conduct supragingival or paragingival tooth preparation in the cervical region.
4. Choose a veneering material or metal that will cause minimal attrition of the occlusal surfaces of the antagonistic teeth⁵.
5. Fixed prosthetic restorations should be luted on the supporting teeth with the glass ionomer luting cement, not with zinc phosphate cement.

After making the prosthetic appliance:

1. Show the child how to maintain the hygiene of the prosthetic appliance.

2. Teach the child how to take care of the longevity of the dentures.
3. Give instructions regarding the diet, the way of eating.
4. Monitor the child's adaptation to prosthetic appliances, and do everything in your power to make the adaptation period easier and faster.
5. Make timely corrections to prevent mucosal changes accompanied by pain (pressure ulcers).
6. During the night, the dentures should not be worn. Persuade the child to remove the prostheses to allow normal jaws' development, and to prevent the appearance of oral mucositis and palatal papillomatosis (papillary hyperplasia).
7. Schedule regular check-ups and make adjustments to enable eruption of the permanent teeth and to monitor jaws' growth and development.
8. Plan the manufacturing of new mobile prosthetic appliances after the phases of intensive child's body growth and development.

Reference

1. <https://medschool.ucla.edu/body.cfm?id=1158&action=detail&ref=806>
2. Bajraktarova Valjakova E, Miševska C, Korunoska Stevkovska V, Gigovski N, Sotirovska Ivkovska A, Bajraktarova B, Guguvcevski Lj. Prosthodontic management of Hypohidrotic Ectodermal Dysplasia: A case report. *South Eur J Orthod Dentofac Res.* 2015; 2(2):20-6.
3. Innes NP, Ricketts D, Chong LY, Keightley AJ, Lamont T, Santamaria RM. Performed crowns for decayed primary molar teeth. *Cochrane Database Syst Rev.* 2015(12):CD005512. DOI: 10.1002/14651858.cd005512.pub3.
4. Vulićević Z, Beloica M, Kosanović D, Radović I, Juloski J, Ivanović D. Prosthetics in Paediatric Dentistry. *Balk J Dent Med.* 2017;21:78-82.
5. Choi JW, Bae IH, Noh TH, Ju SW, Lee TK, Ahn JS, Jeong TS, Huh JB. Wear of primary teeth caused by opposed all-ceramic or stainless steel crowns. *J Adv Prosthodont.* 2016;8(1):43-52.