

TOPICS OF THE ORTHODONTICS

I. Diagnostics, relations to paediatric dentistry, prevention

1. Etiology of dental anomalies.
2. Orthodontic anomalies, relationship between orthodontic treatment and caries.
3. Documentation in orthodontics and its importance.
4. The importance of and the guidelines for the patient information sheet and the patient consent form.
5. The advantages and shortcomings of Angle's classification of malocclusion.
6. Model analysis at different ages.
7. The diagnostic role and the indication of the different types of x-rays in the field of orthodontics.
8. The evaluation of cephalometric radiographs based on different methods of analysis.
9. Functional examinations, photo analysis and soft-tissue analysis.
10. Aesthetics in Orthodontics.
11. The steps of preparing an orthodontic treatment plan.
12. The development of the craniofacial complex and the dentition
13. The role of the distal plane in the permanent teeth molar occlusion development.
14. Early extraction of deciduous teeth: definition, consequences for the permanent dentition.
Therapy: space maintainers.
15. Traumatic injuries in the primary dentition: classification and therapy. Consequences for permanent dentition, orthodontic problem management.
16. Classification of traumatic injuries of permanent teeth. Interdisciplinary treatment planning.
17. Numerical anomalies of teeth: hypodontia, aplasia. Interdisciplinary treatment planning.
18. Numerical anomalies of teeth: hyperdontia, resulting anomalies and their interdisciplinary treatment.
19. Caries in primary teeth, treatment, and the importance of conservative treatment considering the development of permanent dentition.
20. The importance of preserving the supporting zone in primary and early mixed dentition. The definition and importance of Leeway space.
21. Endodontic treatment of immature permanent teeth and its significance during the orthodontic treatment.
22. First permanent molar extraction: indications, contraindications and consequences considering the development of dental anomalies.

23. Anaesthesia in paediatric dentistry and oral surgery in children. Frenulectomy, frenulotomy: indications, techniques.
24. Ambulant oral surgery supporting orthodontic treatments.
25. Defining pre-orthodontic myofunctional trainers, indications, and contraindications.
26. Prevention in orthodontics: definition and classification. The presentation of orthodontic profilaxis: general prevention, influential factors (inner and outer), the importance of keeping the supporting zone.
27. Early orthodontic treatment. The possibilities of interceptive treatments, simple orthodontic appliances. Myotherapy.
28. The prevention of caries and periodontal problems during treatment with fixed orthodontic appliances.
29. Treatment of incipient caries during and after treatment with fixed appliances.
30. Psychological aspects of the orthodontic treatment. Realistic and unrealistic expectations in relation to orthodontic treatment.

II. Appliances, Biomechanics

1. The biology of orthodontic tooth movement.
2. Cellular, tissue-level and periodontal responses to orthodontic force.
3. Biomechanical design factors for orthodontic appliances.
4. Development of fixed appliances and influencing factors.
5. Types of removable appliances, elements, their working mechanism, indications and their activation.
6. The build-up and grouping of activator type appliances.
7. Frankel appliances: types, indication, their making and activation.
8. Local fixed appliances and their working mechanism.
9. The grouping of multiband appliances based on their material. The types, the built-up and the built-in prescriptions of the brackets.
10. The working mechanism of multibond techniques and their field of application (Standard Edgewise, Light Wire, Roth, MBT, Damon, etc.)
11. Direct and indirect bonding techniques. Lingual technique.
12. Aligner therapy: Invisalign, Clear Aligner etc.

13. Types of appliances with extraoral anchorage, their working mechanism and indications.
14. Transpalatal appliances, wires.
15. The types, features and application of different wires used in orthodontics.
16. The role of friction, friction-free systems, sliding mechanism.
17. Intermaxillary appliances.
18. TAD (Temporary Anchorage Device): design, indications and contraindications.
19. Appliances used with cleft lip and palate patients.
20. Indication, types and design of anchorage used with fixed appliances.
21. The effect of the forces in orthodontic treatment to the sutures and the temporomandibular joint.
22. Adverse effects of the forces in orthodontic treatment.
23. Types of implants in orthodontics and their application.
24. Distractors.
25. Special aspects of orthodontic therapy for adults.
26. Pain in orthodontic treatment. Finding the source of the pain and easing the pain. Differential diagnostic problems. Injuries caused by orthodontic appliances.
27. The role of wisdom teeth in the planning of orthodontic treatments. Pros and cons of extracting wisdom teeth. The timing and method of extraction.
28. The aesthetic considerations of choosing and applying the right orthodontic appliance. Compliance. The effect of the patient's compliance on the success of the orthodontic treatment.
29. Achieving hygienic requirements in orthodontics. Disinfection and storage of the appliances and materials.
30. Cleaning of different types of orthodontic appliances. Ensuring appropriate oral hygiene during the orthodontic treatment.

III. Therapy

1. The early treatment of dentoalveolar anomalies.
2. The treatment of dentoalveolar anomalies in the late mixed dentition and in the permanent dentition.
3. The prevalence of impacted teeth, localisation and treatment.
4. The diagnostics and etiology of skeletal vertical anomalies.

5. Treatment and retention of deep bite.
6. Treatment and retention of open bite.
7. Correction of transverse problems at different ages.
8. Diagnosis of sagittal skeletal problems and the time of starting the treatment.
9. Appliances used for treating sagittal skeletal anomalies and their working mechanism.
10. Causes and treatment of Class II/1 anomalies.
11. Treatment of Class II/2 anomalies.
12. The comparison of the treatment and the retention in Class II/1 and Class II/2 anomalies.
13. Orthodontic treatment of Class III anomalies.
14. Definition and treatment of pseudo progenia.
15. The physiological and pathological effects of the dental anomalies and of orthodontic treatments on the periodontium.
16. Concepts and elements of anchorage.
17. The possible causes of relapse.
18. Retention following the orthodontic treatment.
19. The classification of cleft lip and palate. Accompanying disorders.
20. The role of the orthodontist in the team managing cleft patients.
21. The role of orthodontic treatment with patients with missing teeth. Factors influencing the treatment plan. The role of the orthodontist in the team managing cleft patients.
22. Orthodontic space closure: indications, contraindications and treatment in the frontal area.
23. Orthodontic space closure: indications, contraindications and treatment in the area of the premolars and molars.
24. Preprosthetic orthodontic treatment types and their implementation.
25. Extraction in orthodontics: when, why and which teeth are to be extracted during treatment.
26. Timing of orthodontic treatments. The time of the optimal starting, duration of the treatment and the frequency of the patient's visits.
27. Compensating extractions in orthodontics.
28. The indication and types of orthognatic surgeries.
29. Planning of orthognatic surgeries. The aims and the steps of the pre- and postsurgical treatment.
30. The most frequent mistakes made during orthodontic treatments and their consequences