Introduction to Pediatric Dentistry - examination, treatment plan, organisation of dental care for children.
Pediatric Dentistry:

- one of 7 branches od Dentistry
- aim is to provide full dental (oral) care for young generation
- closely bonded with Orthodontics
- cooperation with neighbouring medical branches such as:
  Pediatrics, Otolaryngology, Psychology
- dental care is provided from birth to adolescence
- Pediatric Dentistry deals with: prevention, diagnosis, and treatment of diseases of oral cavity (orofacial region) – dental caries, endodontic treatment, trauma, developmental anomalies
Pediatric Dentistry - Pedodontics

- the youngest branch of Dentistry
- different economic & organizational reasons
- specific biological & physiological particularities of developing organism
- psychological aspect of the child’s individuality in relation to dental treatment
History of Pediatric Dentistry

- up to the end of 19th century – dental care of young generation sporadic
- treatment evoked by an acute need
- prevalence of extractions
- treatment by medicine men, physicians, dentists
- complications of stomatologic diseases treated by surgeons
- independence of PD as a specialized branch – at the end of 19th century
History of Pediatric Dentistry

- 1st policlinic for the treatment of schoolage children in Europe – Strasbourg, 1888, by Danish-born stomatologist Jessen
- 1st institute in our country – Prague, 1907
- 1st specialized pedodontic department – dental clinic, Prague, after WWII in 1946, prof. Kostečka
- Kosice - 1st pedodontic department in 1957
- Independent Dental Clinic 1971
- Pediatric Dentistry Department as independent department of 1st Dental Clinic in 1984
- SK - 2008 Pediatric Dental Medicine – subspecialization
- SK - 2010 Pediatric Dental Medicine – specialization
Books

- Significant - 1st compendium by Jordan, 1925
- Pediatric Dentistry: A Clinical Approach
  Goran Koch, Sven Poulsen et al.
- Pediatric Dentistry: Infancy Through Adolescence (Pediatric Dentistry) by
  Jimmy Pinkham, Paul Casamassimo, Henry W. Fields, and Dennis J. McTigue
- Handbook of Pediatric Dentistry by Angus C. Cameron BDS(Hons) MDSc(Syd) FDSRCS(Eng) FRACDS FICD and Richard P. Widmer BDSc(Hons) MDSc(Melb) FRACDS FICD (Paperback - Aug 1, 2008)
- Paediatric Dentistry (Oxford Medical Publications) by Richard R. Welbury, Monty S. Duggal, and Marie-Thérèse Hosey (Paperback - Sep 1, 2005)
Dental examination of child

- First visit:
  - should be taken as an opportunity to introduce dentistry to the child in a pleasant manner
  - each patient has a dental record – specific record at pedodontic department
**Initial interview & case history:**

- detailed medical & dental history
- information taken from parents
- family history – haemophilia, diabetes, hereditary diseases, etc.
General appraisal - evaluation:

- general information from the talk with small patient / parents
- show interest about child’s intelligence
- explain relation to the dental treatment
- the main complaints are limited to the symptoms-subjective evidence of a disease or condition-as perceived by parents or symptoms-objective.....by child
- the decision to choose a parent, child or both to describe a problem
- description of main complaint, reason of seeking care, pain/trauma –etiology,condition,location
- short history since onset including attempts to solve the problem, prior to visit
- deal with & resolve the main complaint in the first visit – if possible
Extraoral examination:

- take notice of facial proportion
- symmetry of the face
- soft tissues of the face – colour, swelling, pain to pressure/palpation
- limitation of jaw movements
- overbite
- moving fragments, signs of trauma
Intraoral examination - soft tissues:

- soft tissues: colour, texture & shape of lips, mucosa, palate, pharynx, floor of the mouth, tongue, gingiva
- if soft tissue lesions are present – their clinical features, location & size should be fully described & dated
Intraoral examination - hard tissues:

- good charting system – condition of the hard tissue pathology + information of required treatment
- uniform dental recording, according to FDI, two digit system
- given digit for permanent dentition 1-4...1-8
deciduous dentition 5-8...1-5
- starting with upper right quadrant
- examination of every tooth + every surface
- various marking system
- history of trauma – pulp vitality test
Examination of child patient:

Why is examination important?

Examination must be targeted systematically, to avoid overlooking any important signs.

Examination
↓
synthesis of facts & findings
↓
set the diagnosis & treatment plan
Examination of child patient:

- psychoprofylaxy, psychotherapy (overall picture of the psychical status of the child patient, attitude towards the treatment, mental maturity)
- contact initialization
- overall picture of the organs of oral cavity and orofacial region
- oral disease development risk assessment
- determination of the diagnosis
- creating the treatment plan
- sugestions for preventive measures/precautions
Dental examination includes:

- initial interview & case history
- general appraisal – evaluation (general examination)
- extraoral examination
- intraoral examination – soft, hard tissues

- Auxiliary examinations (radiographic examination, CT, MRI, USG, blood count and other blood special tests, biopsy, microbiological examination, pediatric, psychiatric, psychological, genetic and other specific examinations, measurement of growth & developmental assessments
Examination of child patient - sample protocol:

Basic examination:

OVERALL EVALUATION OF MENTAL STATUS:
- child’s appearance and behaviour
- initialization of the dialogue (mental maturity, evaluation of behavioral characteristics – fearfulness, negativism, resistance, willingness to cooperate, parental dependance)
- physical maturity
Examination of child patient - sample protocol:

ANAMNESIS:

Chronological record, gaining information relevant to the present illness.

It is an important part of examination, fixed and extensive set of questions are asked about the course of the disease and general health status as well. Anamnesis is aimed at History of presenting complaint and Past Medical History (including personal, family, social anamnesis, allergies, medications, etc.). The structure of anamnesis, depth and focus depends on the type and severity of the disease.
Examination of child patient - sample protocol:

ANAMNESIS:

Social A:

- name, birth number, insurance, address, school, telephone No., referral
- about parents: attitude towards dental treatment, past treatment in dental office, oral hygiene, dietary habits

About general health status:

- pregnancy, afterbirth period, eruption of first milky teeth, bad habits, any previous surgery/operations, any current ongoing illness, e.g. diabetes, diseases of pulmonary tract, endocrine system, cardiovascular system, neurologic diseases, hematologic diseases, onkologic, allergies, medications, previous hospitalisations, etc.
Examination of child patient – sample protocol:

ANAMNESIS:

History of the present illness, presenting complaint:
- pain: duration, character, radiation, night pain
- swelling: duration, temperature
- trauma: date, place, time, administered medication, witnesses, vomiting, bleeding, loss of consciousness, tetanus vaccination
- Preventive check-up: hygiene (how, who, frequency), dietary habits (frequency and amount of sweets, addition of sugar into baby food, falling asleep with baby-bottle, breastfeeding)
Examination of child patient - sample protocol:

EXTRAORAL EXAMINATION:

1. INSPECTION:
   - Facial asymmetry, swelling (size, character), skin (defects, colour), lips, mouth opening

2. PALPATION:
   - of tissues and organs related to the disease, palpation of lymph nodes
   - temperature of the skin above the swelling
   - fractures (pathologic movement of fragments)
   - pain on palpation

3. AUSCULTATION
   - TMJ diseases
Examination of child patient - sample protocol:

INTRAORAL EXAMINATION:

1. Examination of hard dental tissues (number of teeth, type of dentition, plaque, developmental anomalies of DHT, caries experience, hygiene, anomalies in position of teeth, intermaxillary relation anomalies)

2. Examination of soft dental tissues (gingiva, buccal mucosas, salivary glands ducts and orifices, soft and hard palate, index (CPITN – compulsory from 15. years of age ! ), frenuli insertion, tongue)

3. Record of status localis (local findings) into documentation of the patient
Examination of child patient – sample protocol:

RADIOLOGIC EXAMINATION – X-ray

Indications:
- Evaluation of development of orofacial system and teeth
- Evaluation of developmental anomalies
- Dg. caries, parodontopathy, cysts, tumors
- In the course of endodontic treatment
- after trauma

1. Extraoral x-ray
2. Intraoral x-ray
Examination of child patient - sample protocol:

Auxiliary examinations:

1. Biochemical – to support findings, to confirm assumption of a systemic disease in relation to its manifestation in oral cavity
2. Hematological – blood count, blood clotting tests
3. Biopsy - to determine the presence or extent of a disease, to support diagnostic process
4. Bakteriology - saliva (caries risk assessment), exudate, pus (cultivation and sensitivity tests)

Outcomes of auxiliary examinations serve in diagnostic process – help to set or clarify the diagnosis or show the need of alteration of therapeutic or preventive methods.

Special examination: immune profile of patient, consultations - pediatric, ORL, allergology, dermatovenerology, kardiology, nefrology, psychology, psychiatry.

Preoperative examination before treatment in GA: pediatric, kardio, anesthesiologic
Examination of child patient - sample protocol:

DATA EVALUATION AND DIAGNOSE SETTING

TREATMENT PLAN

Factors influencing the treatment plan:
- Patient age
- Ability to cooperate
- General health status
- Intensity of cariosity
- Need of acute procedure
- Economic ability
Examination of child patient - sample protocol:

SETTING OF A TREATMENT PLAN:
- Following examination of the patient
  1. Actions to improve oral hygiene
  2. Surgical treatment
  3. Conservative treatment
  4. Parodontologic treatment
  5. Prosthetic treatment, orthodontic treatment
  6. Preventive measures

Treatment plan is not unchangeable, it can be modified according to changing diagnosis and response of an individual in the course of the treatment. Aim of treatment plan is to provide a full-scale treatment to facilitate harmonious development of oral cavity organs with emphasis prevention of orofacial diseases.
**Dental Chart**

Zdravotný záznam.

- Used at 1. stomatologicka klinika

1. **Cover:** - surname, name, date of birth, birth personal number, code of insurance, address, dispensarisatio – close follow up

2. **Sheet 1/2.: zdravotná dokumentácia:** - department, priezvisko, surname, name, birth personal number, code of insurance, address, ID number, phone, job, employer, patient referred by..., consents with personal data processing, photodocumentation, treatment within practicals of LF UPJŠ, stam, signature of doctor

   **Sheet 2/2: Personal history questionnaire:**

3. **Sheet 3:** Data record and dental chart for children and adolescent (dental status chrupu, dmft, dmfs, DMFT,DMFS, CPITN, BoP, frenuli insertion, oral examination, orthodontic anomaly, orthodontic therapy)
**Dental Chart**

Zdravotný záznam

4. Sheet 4.: - záznam o priebehu liečby – treatment record: date, time, code of treatment for insurance company, payment.

subj.problems, obj.findings, diagnosis, therapy - procedures, signature and stamp of doctor

5. Other parts of documentation:

- Informed consent (dental caries treatment, removal of calculus, preventive check-up, fluoridation, rtg, etc...) – general consent

- Specific consent – administration of LA, extractions, incisions and other surgical procedures
Organisation of dental care for children

When to come for the first visit with a kid to a dental office?

Ministry of Health of SR issued a guidance in November 2009 – 1st dental visit must take place in the period of the 1st year of age.

Aim of the visit:

- Psychological (introduction, meeting with personnel, new environment, to gain positive attitude towards dental examination and treatment). Dentist provides information for parents about dental hygiene for specific age period, dietary habits, etc. First visit ideal when kid has no acute problem. First contact when acute problem – painfull – means bad cooperation of the child in the.

Recall every 6 months (more frequent if needed).
Organisation of dental care for children

- SK – by 1989 dental care provided by school pediatric dentists, free of charge
- SK – since 1989 dental care for children provided by:
  - private dentists, specialized pediatric dentistry departments,
  - Treatment divided: Some procedures fully covered by insurance (preventive check, local fluoridation)
  - some partially covered and with payment from patient,
  - some not covered by insurance (higher standard)
Close follow up- dispensarisatio:

-Aim is to actively search and treat patients who require special continuous preventive or therapeutic treatment.

-Mainly children with systemic diseases (haemophilia, diabetes, cerebral palsy, etc.), treated under GA (uncooperating, disabled), patients with orthodontic anomalies