Clinical anatomy Dentistry

1a. MANDIBLE

- Anatomy repetition
- Changes during life
- Alveolar process, alveolus (compact and spongy bone, bundle bone, resorption, reconstruction)
- Lingual foramen
- Mandibular canal topography, variations
- Mental canal and foramen
- Incisive canal
- Orifices accessoria
- Dentoalveolar topography (the transverse assymetry of alveolus; the rate of the compact and spongy bone; the relationship the root the lower jaw to neighbouring structures)
- Nerve and blood supply repetition

1b. MAXILLA

- Anatomy repetition
- Clinical notes accessory maxillary ostia, maxillary sinus floor, maxillary sinus septa,
 Caldwell-Luc surgery, tuber maxillae, infraorbital canal, palatum (zones of mucous membrane; A and H line)
- Dentoalveolar topography the transverse assymetry of alveolus; the rate of the compact and spongy bone; the relationship the root the lower jaw to neighbouring structures
- Nerve and blood supply (variation) repetition

2a. TEMPOROMANDIBULAR JOINT

- Temporomandibular joint generaly
- Articular surfaces (articular fossa, articular eminence, postglenoid process, mandibular fossa) – description of each structure
- Joint capsule (shape, attachment, layers, solidity) description
- Disc (shape, localization, function, structure, insertion, division on the parts, division of the posterior part, innervation, physiologic position, injury)
- Zenker retroauricular pad (localization, structure, function on the opening and closing of the mouth)

- Ligaments of the TMJ localization, description, function
 - o articular (medial, lateral)
 - o extraarticular (stylomandibular, sphenomandibular)
 - o additional (discomalleolar, Tanaka's)
- Movements of the TMJ detailed explanation
- Hinge and gliding movement
 - o depression
 - o elevation
 - o protrusion
 - retrusion
 - o laterotrusion
- Hypomobility of the TMJ (ankylosis, pseudoankylosis) explanation
- Hypermobility of the TMJ (subluxation, luxation) explanation
- Innervation of the TMJ (branches of the mandibular nerve) description
- Arterial supply of the TMJ description
- Examination of the TMJ (palpation, compression, imaging procedure: x ray, CT, MRi, arthroscopy) description
- Topographical relationship of the TMJ description

2b. MUSCLES OF MASTICATION

- Definition
- Masseter muscle: parts (superficial, deep) origo and insertion, course of muscle's fibres, function, architecture, fascia, examination
- Temporal muscle: origo, insertion, parts, course of muscle's fibres, funtion, architecture, fascia, examination
- Lateral pterygoid muscle: upper and lower heads origo, insertion, course of muscle's fibres, function, architecture, fascia, examination
- Medial pterygoid muscle: origo (anterior and posterior parts), insertion, course of muscle's fibres, architecture, fascia, examination

3. BASIC OF CRANIOMETRY AND CEPHALOMETRY

- Craniometry definition, application
- Cephalometry definition, application

- Craniometric points localization
 - o unpaired: nasion, glabella, bregma, akanthion, lambda, orale, basion, opisthocranion, staphylion
 - o binate: pteryon, porion, euryon, zygion, gonion, endomolare
- Frankfort horizontal plane definition
- Maxillary plane definition; mandibular plane definition
- Dimensions between the craniometric points (size of the skull, face, palatum) how are measurmened
- Indexes of the skull (cephalic, facial and palatomaxillary) how are counted and what indicate
- Cephalometric points localization:
 - sella, nasion, orbitale, porion, anterior nasal spine, posterior nasal spine, gonion, menton, A point, B point
- Cephalometric lines (S-N, N-A, N-B) generally; what does it indicate
- Cephalometric angles (SNA, SNB, ANB) generally; what does it indicate
- Telerentgen recognize, when is used

4a. FUNCTIONAL STRUCTURE OF THE SKULL

- Thickened parts of the skull (base): sagittal line, ventral and dorsal lateral line localization
- Thinner parts of the skull (base): articular fossa, cribriform plate, foramina, canals and fissures, anterior, medial and posterior cranial fossa localization
- Thickened parts of the skull (calvaria): parietal tuber, mastoid process, external and internal occipital protuberantia, temporal line, margin of sulcus sinus sagitalis sup. et transversus localization
- Facial buttresses system definition, description, significance, drawing
 - o vertical buttress: nasomaxillary, zygomaticomaxillary, pterygomaxillary
 - o horizontal buttress: glabella, orbital rims, zygomatic processes, maxillary palate
 - o free places between the framework: orbit, maxillary sinus, nasal cavity
- Transmission of the masticatory forces to the skull: trajectory lines, vertical buttresses
 system explaining, drawing

4b. FRACTURES OF THE SKULL

Neurocranial fractures (linear, depressed, basilar) – generally, fracture lines

Symptoms and complication of the cranial fractures (cranial nerve lesion, otorrhea, rhinorrhea, Battle's sign, Raccoon eyes, intracranial hemorrhage, cranial oedema) – basic description

Craniofacial fractures - detailed description:

- Mandible
 - o fractures of the body
 - o angle fractures
 - o symphyseal and parasymphyseal fractures
 - o condylar process fractures
- Lower midface (Le Fort I)
- Upper midface
 - o naso-orbitoehmoid
 - o zygomaticomaxillary complex
 - o orbital
 - o Le Fort II
 - o Le Fort III
- Craniobasal-facial

5. RADIOGRAPHY OF THE HEAD

- Types of imaging methods (x ray, magnetic resonance, ultrasonography)
- Summation imaging x storeyed imaging, differences
- Conventional and digital radiography, differences, advantages
- Intraoral radiography (bisecting, paralleling and bitewing technique, occlusal radiograph)
- Full mouth x ray
- Reading of x ray
- Extraoral radiography (ortopantomography, cephalometry, conventional lateral, posteroanterior, sumbentovertical, Hirtz, Waters, Clementschitsch)
- Special radiography (Stenvers and Schullers projection, Albert-Schonberg view)
- Contrast imaging (sialography, arthrography, antrography, cystography, fistulography, angiography)
- Computerized tomography generally

- Magnetic resonance imaging generally
- Ultrasonography generally

6. ODONTOGENIC INFECTION PATHWAY

For understanding of this chapter it is necessary repeat following topographic boundaries of these spaces: temporal; infratemporal; sublingual; submental; submandibular; pterygomandibular; parapharyngeal

- Odontogenic infection definition, causations, influence of the degree of infection
- Types of odontogenic infections (localized, diffused) differences, barriers of spreading
- General signs of infection (rubor, tumor, calor, dolor, functio laesa) general description, reasons
- The possibility of spreading of dental infection (per continuitatem, by vascular, by lymphatic) explanation
- Abscess causal tooth, localization, barriers of spreading, spreading, risk
 - o vestibular; palatal
- Diffused infection causal tooth, localization, barriers of spreading, spreading, risk (buccal space; temporal space; infratemporal space; infraorbital space; submental space; submandibular space; sublingual space (Ludvig's angine); masseteric space; pterygomandibular space; lateral pharyngeal space; maxillary sinus
- Infection in neck space (pretracheal, prevertebral, visceral neck spaces) description
 - abscess: subcutaneous, suprasternal, pretracheal, parapharyngeal, retropharyngeal) –
 explanation of origin, spreading
- Bacteriemia explanation
- Infected thrombus explanation
- Ventral and dorsal pathway of spreading infection in venous system of the head description

7. DENTAL ANESTHESIA

For understanding of this chapter it is necessary repeat trigeminal nerve. Student can draw areas of innervation and anesthetic into the pictures.

- Pain definition, causation
- Local anestetic definition, how they act on the peripheral nerve
- Vasoconstrictors definition, reason for its additing, advantages

- Complication of dental anesthesia description
 - o nerve injury (paresthesia, hyperesthesia, dysesthesia, dysgeusia, xerostomia, ocular and extraocular symptoms
 - o bleeding
 - o intraglandular injection
 - o trauma of muscle
 - o systematic complication
- Types of local anesthesia basic description
- Local infiltration technique, localisation in upper and lower jaw
- Nerve block technique, localisation, description
 - o PSA, MSA, ASA, infraorbital, great palatine, nasopalatine, alveolar inferior (Haldstead, Gow- Gates, Akinosi), mental, lingual, buccal
- Alternative delivery methods (intraosseous, intraligamentary and intrapulpar injection, topical anesthetic patches description