

V-X Particularities of prosthetic treatment in wrong consolidation of bone fragments, false joints, microstomy and contractures.

Maxillae-facial orthopedy

is a device of prosthodontic that study etiology, pathogenesis, clinic, prophylaxis and treatment of the defeats and deformations of maxillae-facial zone appeared after trauma, surgical treatment and another disorders and includes several departments:

1. Clinical picture and treatment of trauma of jaw's bone and their possible complications;
2. Clinical picture and treatment of hereditary and acquired defects of maxillae-facial region and their complications.
3. Liquidation of stomatognathic system disorders by using orthopedic methods.
4. Using prosthetic methods at surgical treatment of deformations and defects of maxillae-facial region.

Treatment of muscles and TMJs deformations.

False joint means:

- presence of pathological mobility in the region of jaws bone parts
- absence of bone union in the region of fracture after 3 – 4 weeks after trauma.

Etiology of incorrect consolidated fractures:

I – Local:

- a) late, incorrect and insufficient immobilization in case of jaws fractures;
- b) premature removing immobilization system;
- c) massive damaging soft tissues and hitting the fractured part in zone of the fracture;
- d) fractures complicated with absence of bone tissues more than 2 cm;
- e) chronic traumatic osteomyelitis of jaws bone;
- f) incorrect choosing immobilization system;
- g) bad fixation of immobilization system;
- h) separation of big part of periosteum.

II – General:

- a) diseases that can act on the reactivity of the organism (Tb, avitaminosis, dystrophy, osteomyelitis, actinomycosis, etc.);
- b) vesicular diseases;
- c) metabolic disorders;
- d) diseases of endocrine system;
- e) nervous system diseases.

Clinical picture of false joint

depends on:

- the degree of mobility of fractured broken parts
- direction of displacement of fractured bone part
- number and topography of remained teeth on the fractured bone parts
- size of bone defeat
- topography of false joint.

Clinical signs of incorrect consolidated fractures:

1. Incorrect consolidation in vertical plane.
2. Incorrect consolidation in transversal plane.
3. Mix.
4. In some cases can appear rough cicatrices that limitate mandible movements, movements of the lips or tongue. Seldom can appear microstomy or mandible contracture.

All these can provoke esthetic disorders and disorders of occlusion.

Clinical picture is characterised by the presence of functional disorders:

- incisal
- mastication
- physiognomical
- phonetical
- deglutition
- from TMJ
- from muscles.

Classification of false joint by Oxman

depending on topography, number of remained teeth and length of bone defeats described 4 groups of false joints:

1. **Both bone fragments have 3 – 4 teeth:**

- bone defeat is equal to 2 cm;
- bone defeat is more then 2 cm;

1. **Both bone fragments have 1 – 2 teeth;**

2. **Bone defeats without teeth on fractured fragments:**

- one of bone fragments without teeth;
- both bone fragments without teeth;

1. **Bothside defeat of the mandible:**

- with presence of the teeth on the middle bone fragments and absence on another lateral fragments;

- with presence of the teeth on the lateral bone fragments and absence on another middle fragments.

Classification of false joint by Kurleandsky :

1. Fracture is localised in the limits of dental arch with presence of teeth on both fragments;
2. Fracture is localised in the limits of dental arch with absence of teeth on both fragments;
3. Fracture is localised out of dental arch.

Posttraumatic treatment in case of incorrect consolidation of fractures

will depends on presence or absence of the teeth and their condition on both fragments, degree of their mobility and general condition of the patients organism and can be:

- surgical
- orthodontic
- surgical and orthodontic
- prosthetic.

All patients can be divided into two groups:

1. with integral dental arch
2. with presence of partial edentation.

Methods of prosthetic treatment:

1. selective grinding – is used when on one of the part of the fracture there is space of inoclusion from 0,5 till 1,5 mm
2. dental tray
3. dental-aveolar tray
4. prosthesis: bridge denture, PRAD

(in case of incorrect consolidation

in transversal plane), PRAD with

two dental arches, PRSD.

Microstomia

- Is defined as acquired or congenital condition involving a reduction of the oral aperture severe enough to compromise esthetics, nutrition, and quality of llife.

- Oral submucous fibrosis

- Scleroderma

Causes of microstomy:

- trauma of oral cavity region
- surgical treatment because of tumors
- burns in maxillo-facial region

- sclerodermy etc.

Contracture of the lower jaw: is characterised by limited movements of the lower jaw as a result of traumatic lesions of the soft and bone tissues of the face because of different etiological factors.

Types of contracture:

Temporal instabil shorttime contracture - appears after trauma as a result of reflective muscles contraction because of pain and inflamatory process in muscles and soft tissues;

Stabile, longtime contracture – appears as a result of consolidation of fractures of the mandible coronoid process ramus, articular and coronoid condyles, zygomatic arch and TMJs damages.

These contractures sometimes can lead to ankylosis of the TMJ – complete absence of movements in the TMJ.

Treatment of contracture

A. Conservative:

- medicines
- physiotherapeutical methods
- gymnastics
- mechanotherapy - violent opening the mouth with the help of mechanical devices and special devices

B. Surgical

C. Combined