

Ministry of Health of Ukraine
POLTAVA STATE MEDICAL UNIVERSITY
Chair of surgical stomatology and maxillo-facial surgery

Statistics, classification of damages of maxillofacial area peace and wartime.

Not-gunshot and gunshot injuries of teeth, alveolar shoots, zygomatic and nasal bones.

Non-gunshot and gunshot injuries of jaws. Statistics, classification, features of clinic, diagnostics and stages of treatment of victims. A transport and medical immobilization at damages of face bones.

Candidate of sciences, reader Ivanytska O.S.

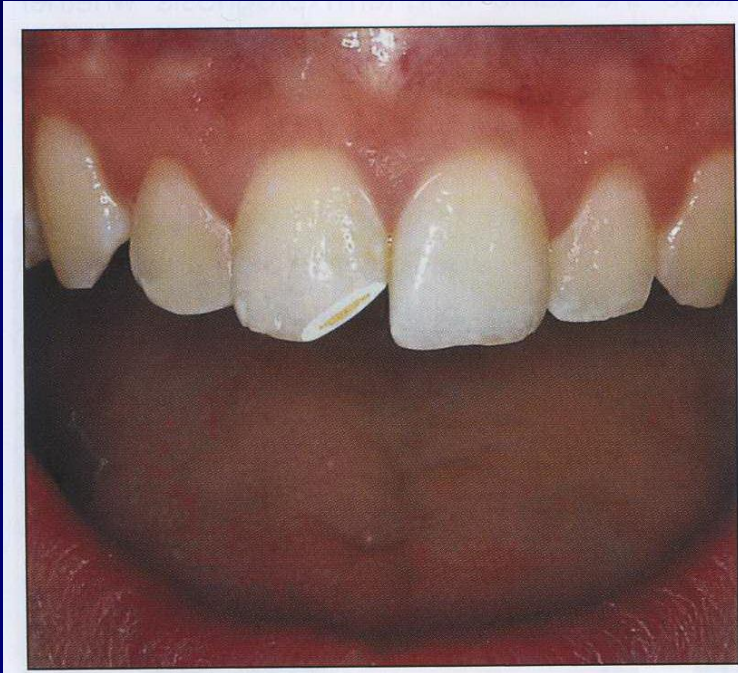
Lecture plan

1. Statistics, classification of damages of maxillofacial area peace and wartime.
2. Anatomy of the teeth and jaws.
3. Not-gunshot and gunshot injuries of teeth, alveolar shoots, zygomatic and nasal bones. X-ray characteristic of damage.
4. Non-gunshot and gunshot injuries of jaws. Statistics, classification, features of clinic, diagnostics and stages of treatment of victims.
5. A transport and medical immobilization at damages of face bones.

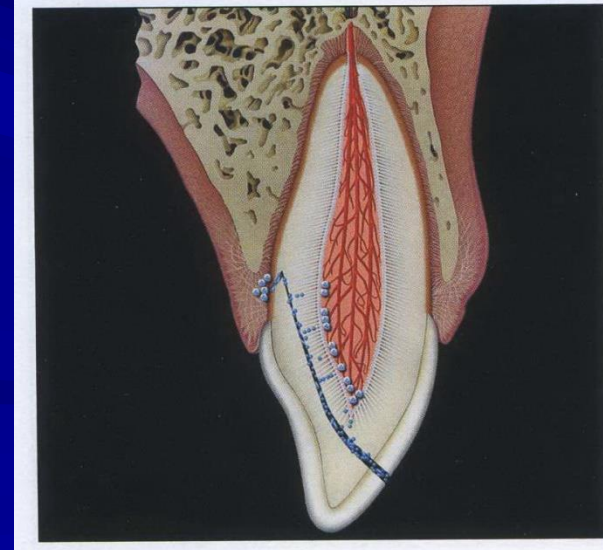
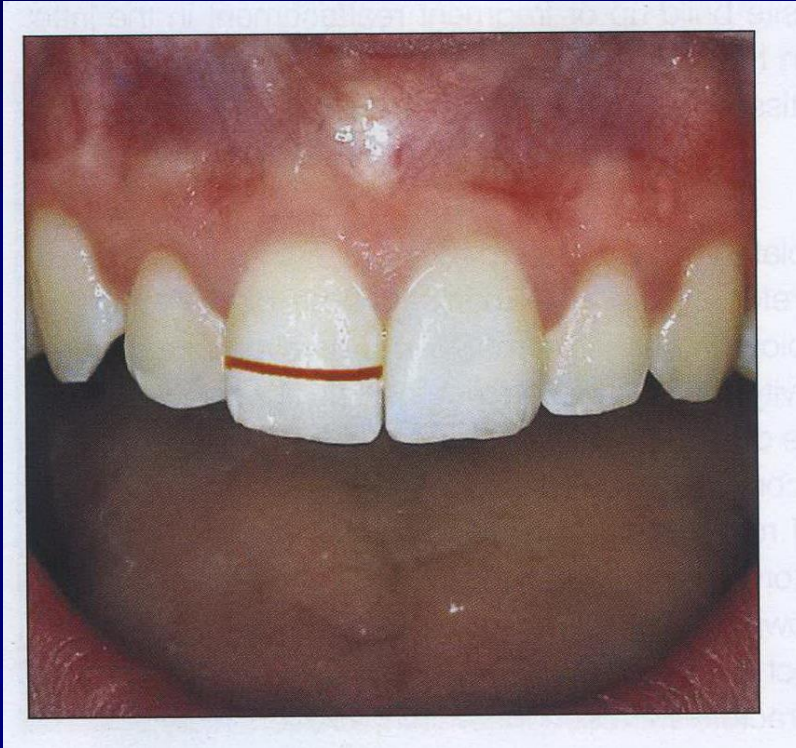
INJURES TO HARD DENTAL TISSUE AND PULP

- **Crown Infraction.**
- **Uncomplicated Crown Fracture.**
- **Complicated Crown Fracture.**
- **Uncomplicated Crown-Root Fracture.**
- **Complicated Crown-Root Fracture.**
- **Root Fracture.**

Uncomplicated Crown Fracture



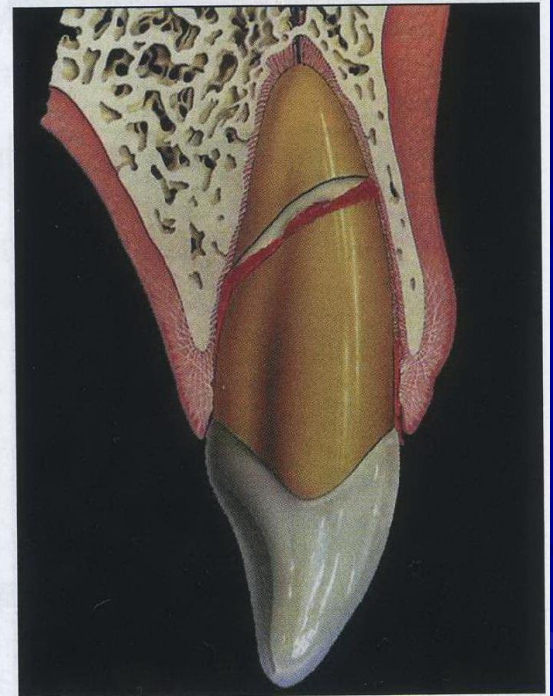
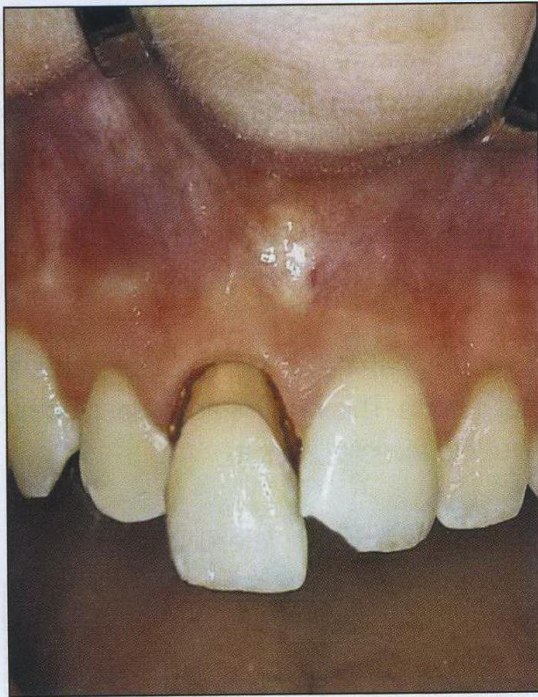
Uncomplicated Crown Fracture.



Complicated Crown Fracture.



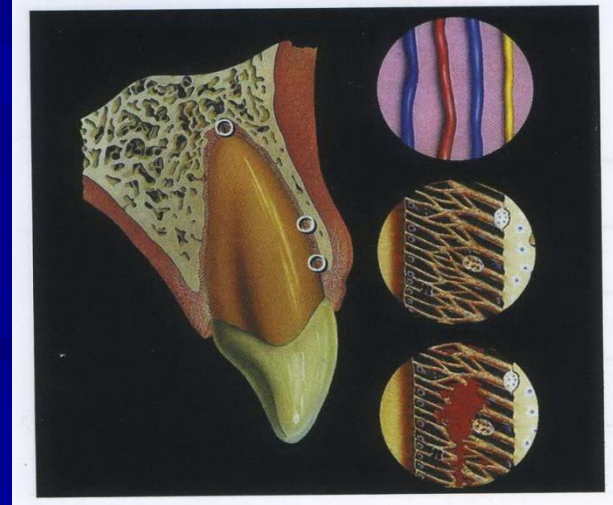
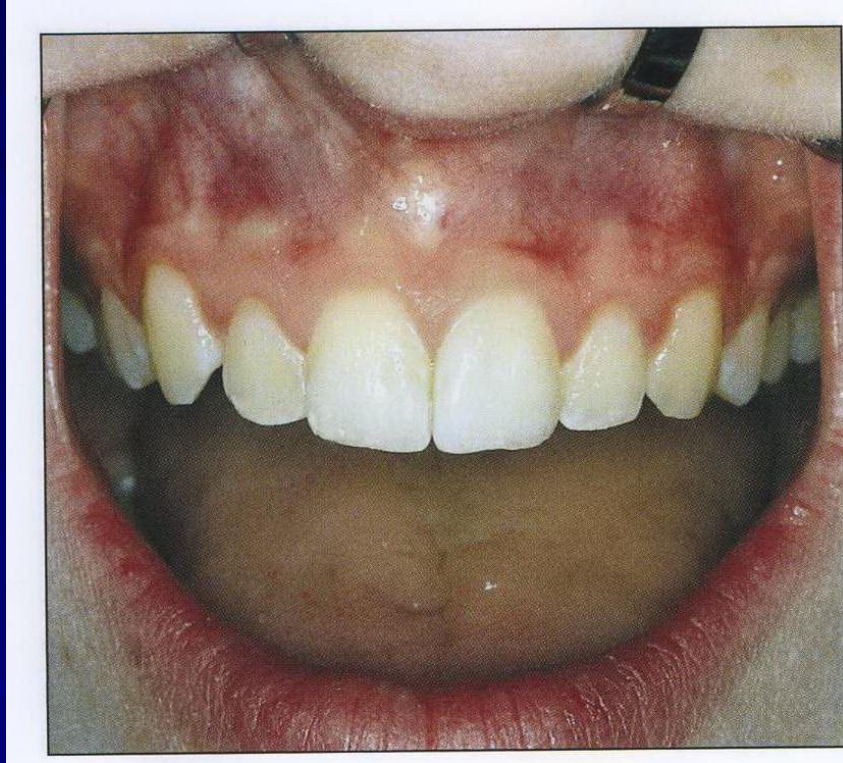
Root Fracture



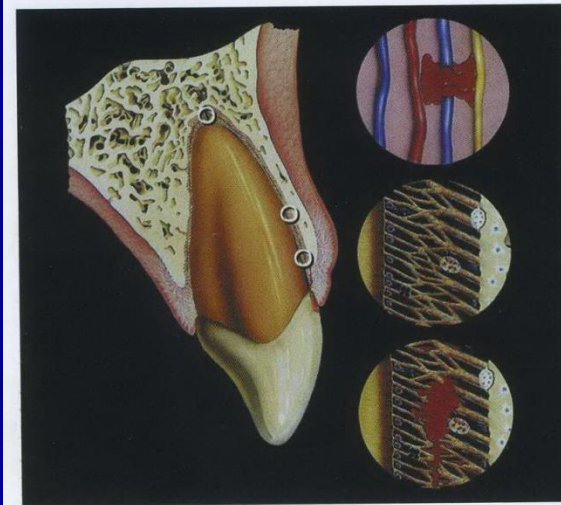
INJURES TO THE PERIODONTAL TISSUE

- Concussion.
- Subluxation.
- Intrusive Luxation (Central Dislocation).
- Extrusive Luxation (Peripheral dislocation, Partial Avulsion).
- Lateral Luxation.
- Retained Root Fracture.
- Exarticulation (Complete Avulsion).

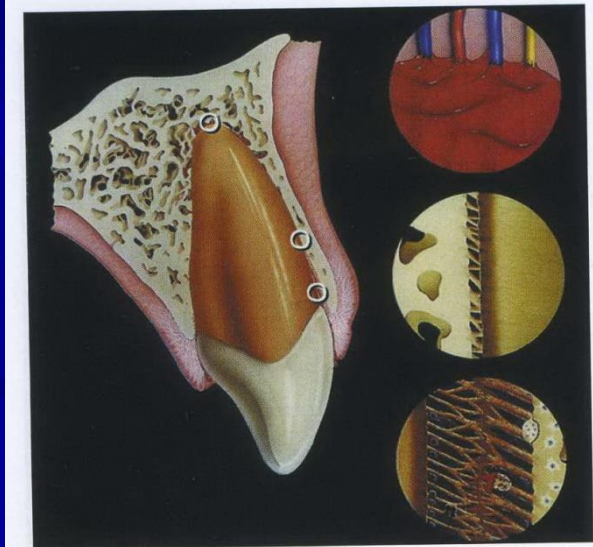
Concussion.



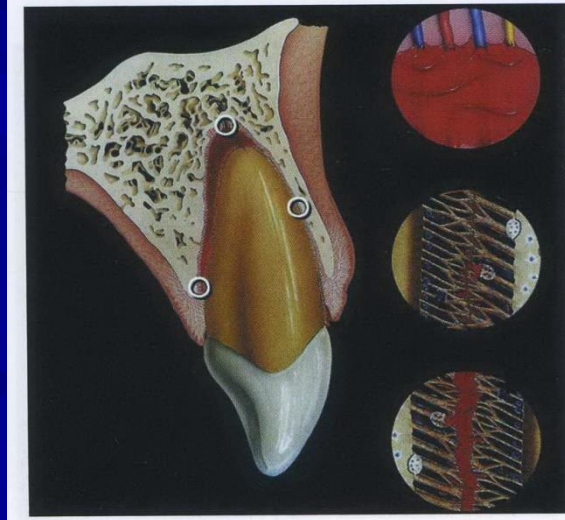
Subluxation



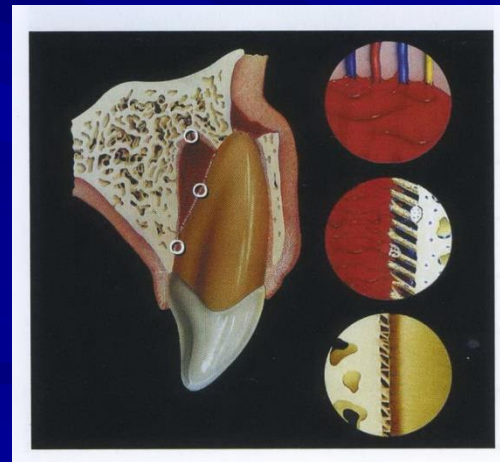
Intrusive Luxation



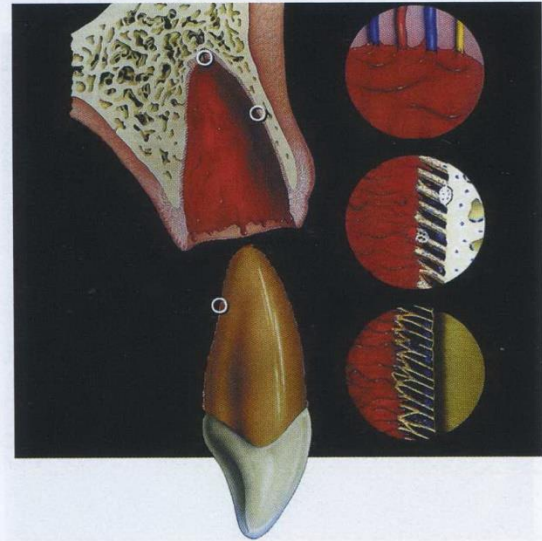
Extrusive Luxation



Lateral Luxation.



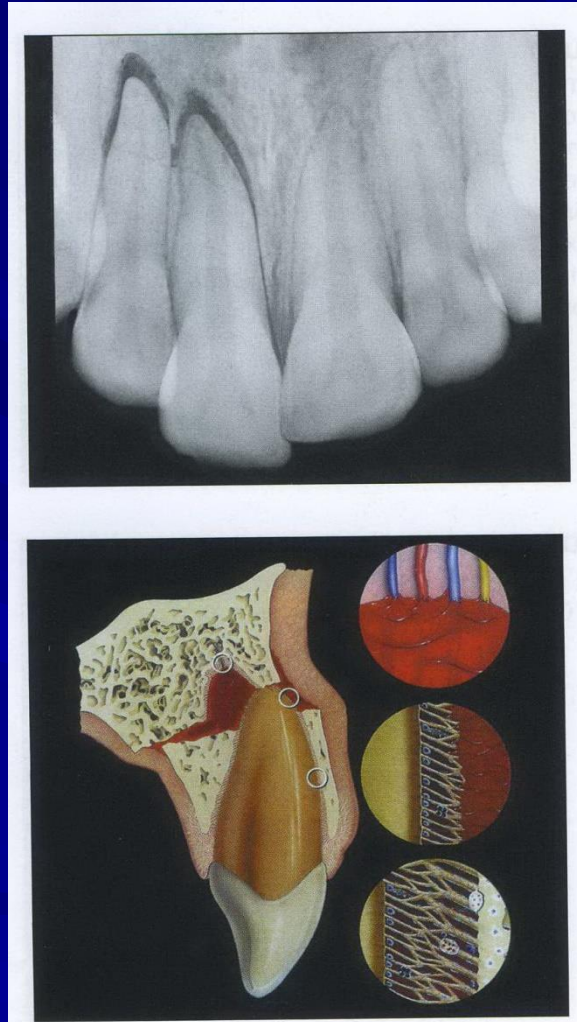
Complete Avulsion



INJURES TO THE SUPPORTING BONE

- **Comminution of the Alveolar Socket.**
- **Fracture of the Alveolar Socket Wall.**
- **Fracture of the Alveolar Process.**
- **Fracture of the Mandible or Maxilla.**

Fracture of the Alveolar Process.



INJURIES TO THE GINGIVAL OR ORAL MUCOSA

- Laceration of Gingiva or Oral Mucosa.
- Contusion of Gingiva or Mucosa.
- Abrasion of Gingiva or Oral Mucosa.

Fractures of the zygomatic bone

- The frontozygomatic;
- The zygomaticotemporal;
- The zygomatico-maxillary sutures.

Fractures orbit of the zygomatic complex involving:

- Minimal or no displacement;
- Inward and downward displacement;
- Inward and posterior displacement;
- Outward displacement;
- Comminution of the complex as a whole.

Fractures of the zygomatic arch not involving the orbit :

- Minimal or no displacement;
- V-type in-fracture;
- Comminuted.

Summary of possible clinical findings in zygomatic complex fractures

- Flattening of cheek;
- Swelling of cheek;
- Anesthesia of cheek, temple, teeth, gingival;
- Periorbital hematoma;
- Subconjunctival haemorrhage;
- Tenderness over orbital rim and frontozygomatic suture;
- Step deformity of infraorbital margin;
- Separation at frontozygomatic suture;

Summary of possible clinical findings in zygomatic complex fractures

- Ecchymosis and tenderness infraorally over zygomatic buttress;
- Limitation of ocular movement;
- Diplopia;
- Enophthalmos;
- Lowering of pupil level;
- Epistaxis;
- Limitation of mandibular movement.

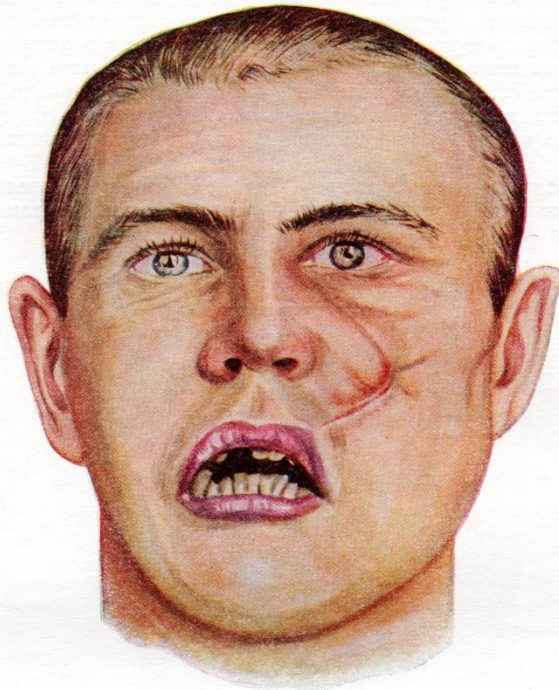


Рис. 73.

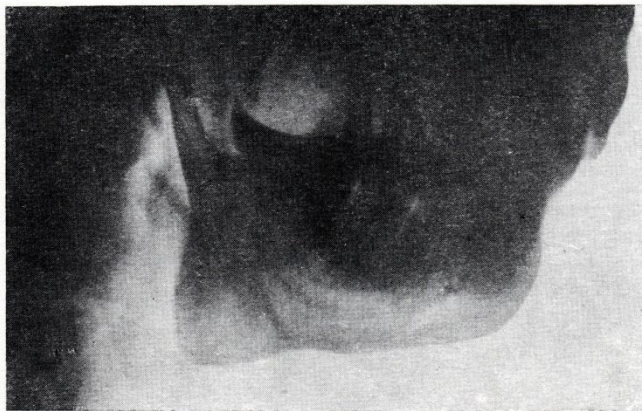
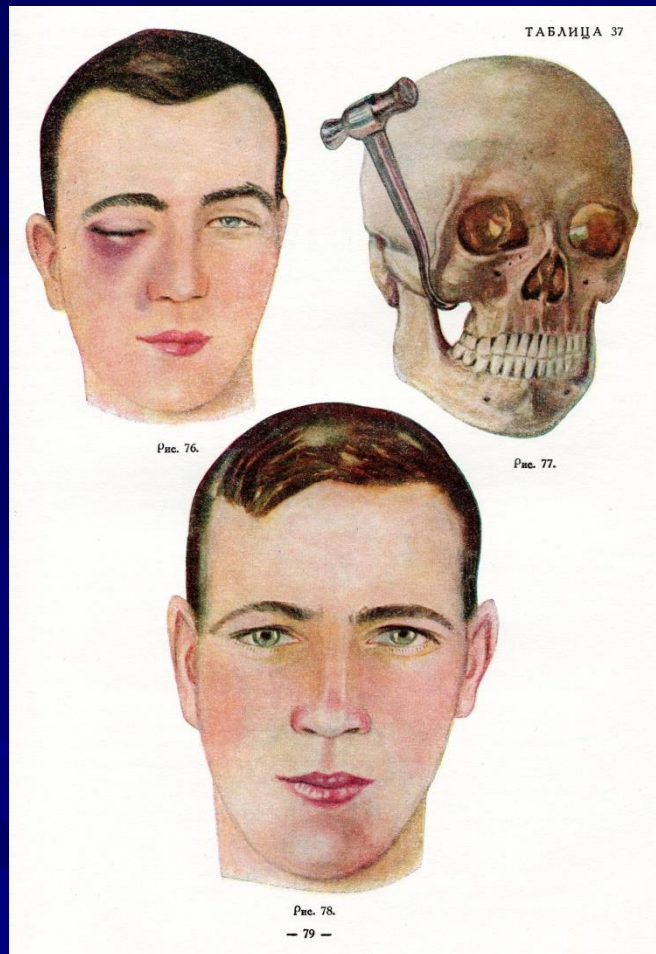


Рис. 74.

■ The zygomatic complex fractures

The zygomatic complex fractures



Nose

- Anatomically, a **nose** is a protuberance in vertebrates that houses the nostrils, or nares, which admit and expel air for respiration in conjunction with the mouth. Behind the nose is the olfactory mucosa and the sinuses. Behind the nasal cavity, air next passes through the pharynx, shared with the digestive system, and then into the rest of the respiratory system. The nose is located centrally on the face.

Summary of possible clinical findings in nasal complex fractures

- Bruising of skin over nasal bones;
- Laceration of skin of bridge of nose;
- Bilateral medial orbital ecchymosis;
- Epistaxis;
- Deformity of nose;
- Crepitus of bones of nasal complex;
- Unilateral or bilateral telecantus;

Epistaxis

- **Epistaxis** (or a **nosebleed**) is the relatively common occurrence of hemorrhage from the nose, usually noticed when the blood drains out through the nostrils. There are two types: anterior (the most common), and posterior (less common, more likely to require medical attention). Sometimes in more severe cases, the blood can come up the nasolacrimal duct and out from the eye. Fresh blood and clotted blood can also flow down into the stomach and cause nausea and vomiting. It is rarely fatal.

Summary of possible clinical findings in nasal complex fractures

- Airway obstruction;
- Septal deviation;
- Septal laceration or hematoma;
- Cerebrospinal rhinorrhea.
- **Nasal septal hematoma** is a condition affecting the nasal septum. Because the septal cartilage has no blood supply of itself and receives all of its nutrients and oxygen from the perichondrium. An untreated septal hematoma may lead to destruction of the septum. Immediate drainage is necessary. Septal hematomas can cause a saddle nose deformity.

The fracture of maxilla and nasal bones.



The fracture of maxilla and nasal bones.



Questions for discussion of the lecture

1. Anatomical and physiological features of the structure of bones and soft tissues of the face.
2. The mechanism of displacement of fragments during gunshot fractures of the jaws.
3. Features of the staged treatment of victims at the present stage.
4. Features of the primary surgical treatment of bone wounds.
5. Modern methods of osteosynthesis.

Thank you for attention!