

# Trephining



**Assis. Lect. Mohammed Resen**

# Trephining



- ❧ Trephining: is the surgical procedure in which a hole is created in the skull by removal of circular piece, while a trephination is the opening created by this procedure.
- ❧ Trephining is the traditional approach for surgical access to the paranasal sinuses (frontal sinus, maxillary sinus). The trephines range in size from (0.6 cm, 1.25 cm, 1.9 cm, 2.5 cm and 3.1cm) according to the type of trephine (Galt and Michele), the size of the trephine selected depends on the intended purpose of the opening.

# Trephining



✧ *Michele* and *Galt* Both are T-shaped and capable of drilling a cylinder of bone. The *Michele* trephine is available in graduated inner diameters of 0.6 to 3.1 cm. It contains a graduated scale along its shaft, allowing the penetration depth to be measured. It cuts through bone on the end of the shaft only.

# Trephining



- ❧ The Galt trephine can cut bone at the end of the shaft and along the outside perimeter of the shaft. It is available in graduated sizes from 1.25 to 2.5 cm in diameter and has an adjustable central trocar. The trocar centers the trephine and stabilizes it until a circular trough is cut in the bone.

# Indication



- 1-It is useful for diagnostic to the sinuses diseases
- 2-It is useful for therapeutic access to the sinuses
- 3-Neoplasms in the sinuses.
- 4-Dental fistula
- 5- Alveolar periostitis
- 6-Presence of foreign body, cyst, parasite in sinuses

# Sinusitis



**Sinusitis:** are inflammation or infection of one or more of the paranasal sinuses, and is the most commonly encountered disease of the paranasal sinuses. It is classified as either primary or secondary, and acute or chronic.

Clinical signs

1-nasal discharge

2-unilateral facial swelling

3-epiphora Practical

# Technique

The trephine opening for the so-called “modified frontonasal bone flap technique” (which in fact is a trephine opening) is centered 5 cm axial to the nasal lacrimal duct, 4 cm lateral to the nasal midline, and 2 cm below a horizontal line between the medial canthus. The nasal lacrimal duct can be identified by a line from the medial canthus to the incisive notch. A curved incision is made through the skin and periosteum and reflected from the bone as one. A 5-cm skull trephine is used to make the opening into the conchofrontal sinus. As with other trephinations, the bone disc is discarded. As mentioned before, the skin flap should be larger than the size of the trephine hole in the bone. Leaving a 10-mm to 15-mm margin of skin is even more important for skin closure and cosmetic results using this technique than when using small trephine openings.

# Postoperative care

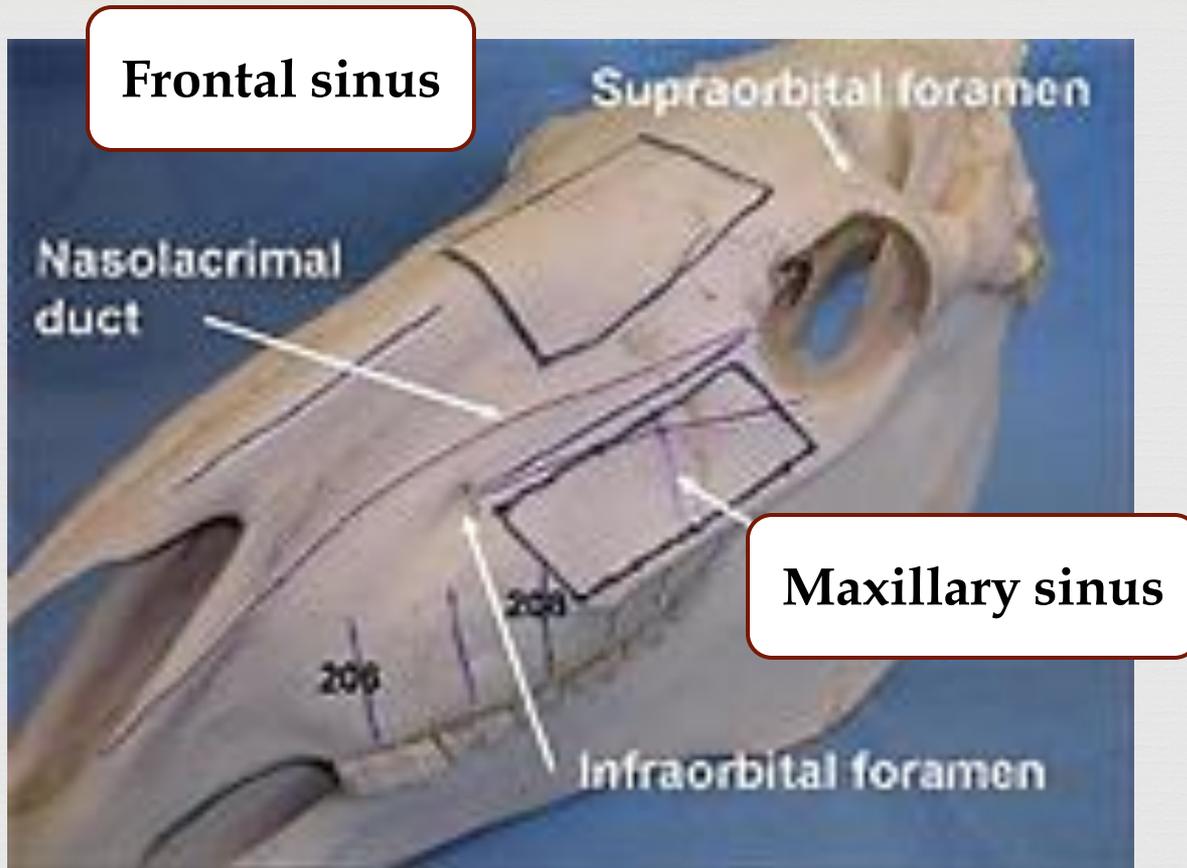


1-anti-inflammatory drugs

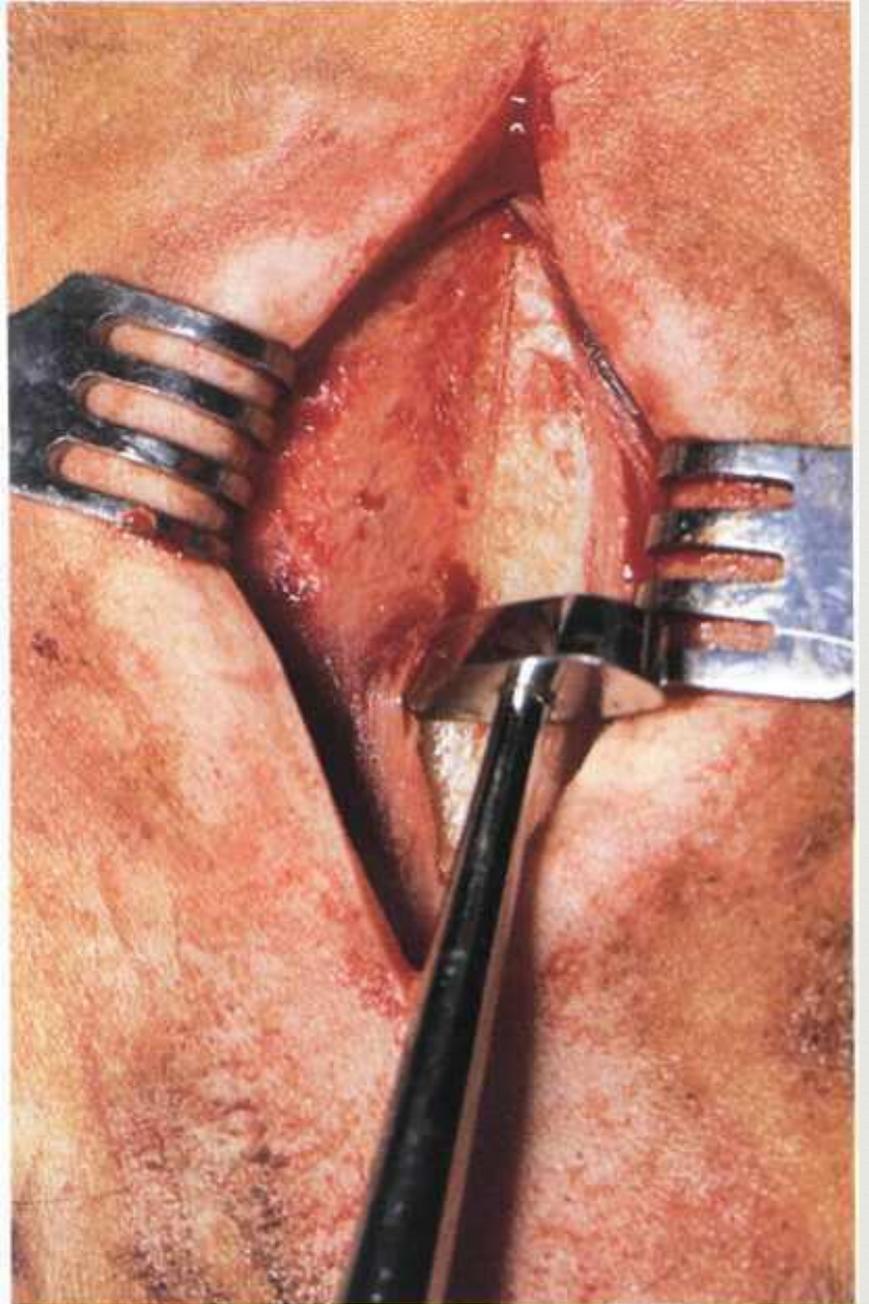
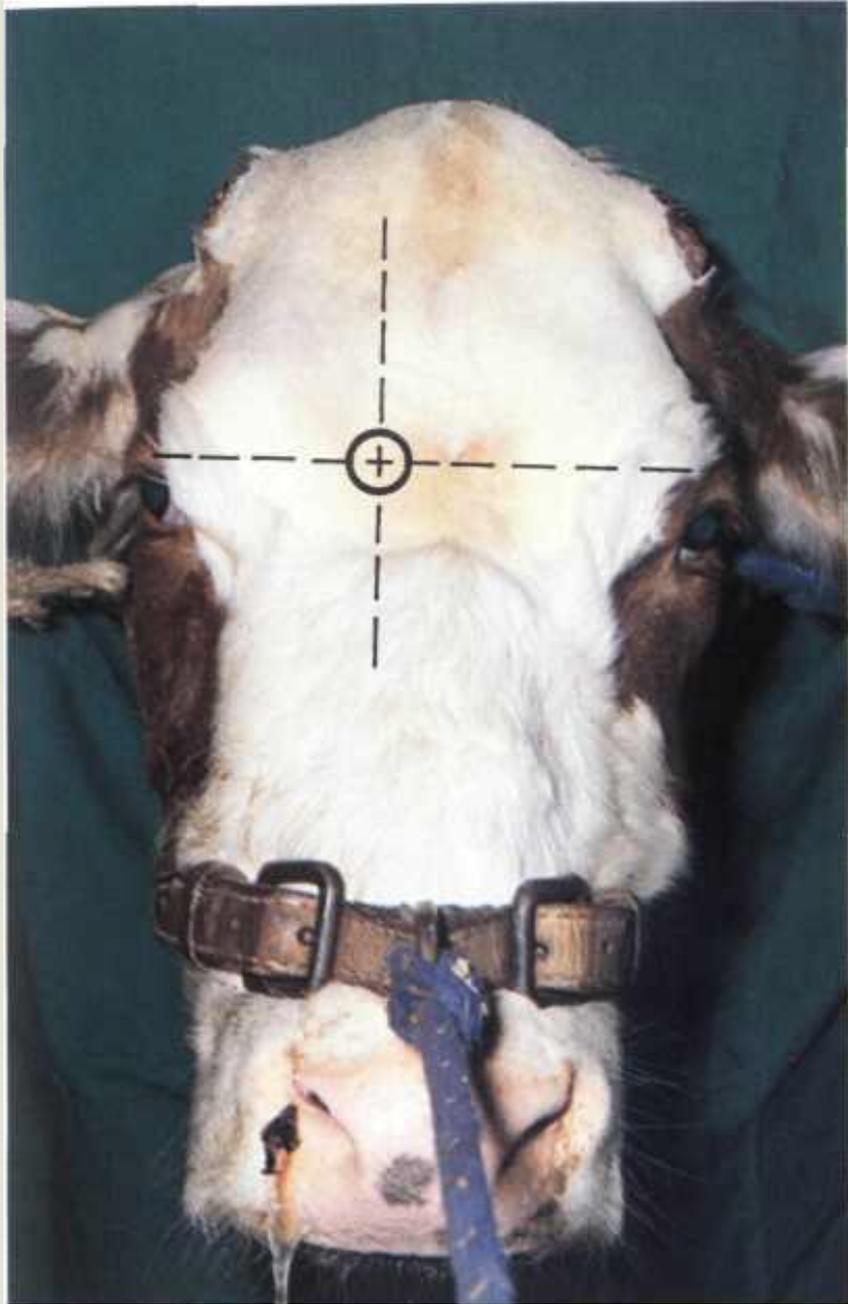
2-systemic antibiotic

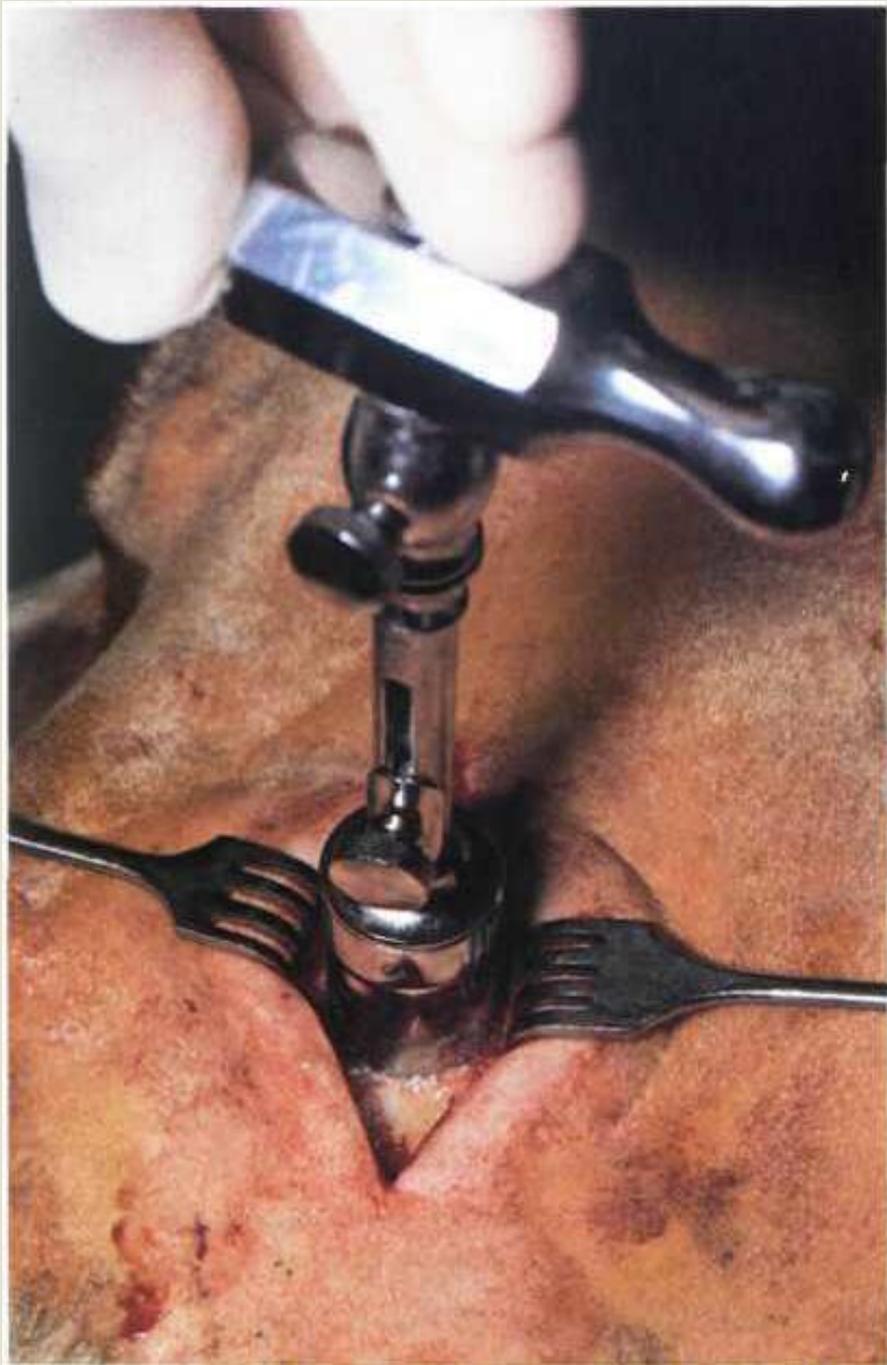


Trephine Instrument



Site of opening in frontal and maxillary sinuses







Thanks To Listen