Lateral orbitotomy with and without bone flap

by

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Approaches to orbital tumors depend on; location, size and suspicious nature of the lesion.

- **Location of lesion:**

- **Size:**

- **Suspicious nature:**
**Indications of lateral orbitotomy:**

1. Intraconal Lesions superior, inferior and lateral to the optic nerve.
2. Total excision of lacrimal gland mass.
3. In combination with medial orbitotomy in large medial orbital lesions.

- **Assessment of proptosis:**
  - Unilateral or bilateral.
  - Degree of axial proptosis using Hertel’s exophthalmometer.
  - Horizontal and vertical displacement are measured using a ruler.
Ophthalmological examination:

- Visual acuity.
- Lid examination for localized swelling and redness.
- Conjunctival examination.
- Cornea, for exposure keratopathy.
- Pupil reaction.
- Fundus examination.
- IOP.
- Ocular motility.
➢ Inspection the lids & palpebral lobe of the lacrimal gland.

➢ Palpation of the orbital rim and orbital lobe of the lacrimal gland.

➢ Retropulsion.

➢ Direction.

➢ Changes in the degree of proptosis.

➢ Detection of pulsating exophthalmos.

➢ Palpation of preauricular and submandibular lymph nodes.

❑ **Investigations:**

➢ **Radiological:**

   CT and MRI

➢ **Laboratory:**

   ▪ *Clotting and bleeding time.*

   ▪ *Complete blood picture.*

   ▪ *Liver and kidney function tests.*

   ▪ *Thyroid function tests.*
Surgical techniques:

➢ General hypotensive anesthesia.
➢ Patients were positioned in a reversed Trendlenberg position.
➢ Epinephrine 1:100000 is injected.
➢ The proposed site of the incision is marked.

We used two types of incisions:

❖ Lazy-S incision (Stallard-Wright).
❖ Extended upper lid crease incision.

➢ The peristomeum on the lateral orbital rim was exposed.
➢ The periosteum was incised 2 mm posterior to the lateral orbital rim.
➢ The anterior portion of the temporalis muscle was disinserted.

➢ Bone cuts were performed.
➢ Two drill holes were performed.

➢ Out-fracture of the bone flap was performed.
➢ Out-fracture of the bone flap was performed.

➢ Identification of the periorbita.
➢ Incision of the periorbita in a T-cut manner.

➢ Excision of the mass:
  - Lacrimal gland mass.
- Cavernous hemangioma:

- Solitary neurofibroma:
Optic nerve glioma:

- After excision of the mass the orbit is explored.
- The periorbita is closed with absorbable sutures.
➢ Bone flap was repositioned:
➢ Polypropylene sutures 4/0.

➢ Titanium microplates and screws.
➢ The periosteum and orbicularis are approximated on the lateral orbital rim using polygalactin 4/0 sutures.

➢ The skin incision was closed with silk or polpropylene sutures 4/0.
➢ No drain was used in any of the cases.
➢ Dressing was applied only to the wound.
➢ **Postoperative care and medications:**
  ▪ Ice packs were applied.
  ▪ Systemic broad spectrum antibiotics and steroids.
  ▪ Skin sutures were removed after one week.
  ▪ Follow up.

❖ **Cavernous hemangioma:**
❖ Solitary neurofibroma:

❖ Primary orbital B-cell lymphoma:
• Benign mixed lacrimal gland tumor:

• Optic nerve glioma:
Lateral orbitotomy without bone flap

- The same steps but no bone flap.
- Can approach mid- and deep orbit.
- Suitable for compressible lesions.
Thank you