

OSTEOPLASTIC ANTERIOR TRANSORAL APPROACH FOR TUMORS OF THE MIDDLE CRANIAL FOSSA

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INTRODUCTION

Various surgical approaches for treating the tumors involving the midline skull base have been described, like transnasal, transantral, and endoscopic approaches. The Lefort I osteotomy with or without mid-palatal osteotomy is one of the techniques of osteoplastic anterior transoral approach to access the skull base. This approach allows a great visualization, not only of the center of the skull base but also of the infratemporal fossa when the posterior wall of the maxillary sinus and the pterygoid plaques are removed.

OBJECTIVE

To describe a transoral approach with a Lefort I osteotomy for tumors of the middle cranial fossa and review proper patient selection and preparation, surgical exposure, and operative procedure.

PATIENT SELECTION AND PREPARATION

- Evaluation of the 3-dimensional tumors localization by means of a computed tomography and/or magnetic resonance.
- Some tumors need an angiography and embolization as a treatment before the surgical intervention itself.
- Dental casts and bite registration, so that an occlusal relationship can be established and an acrylic surgical splint can be made, decreasing the risk of malocclusion and also including a transpalatine bar to prevent a transverse collapse.

SURGICAL TECHNIQUE

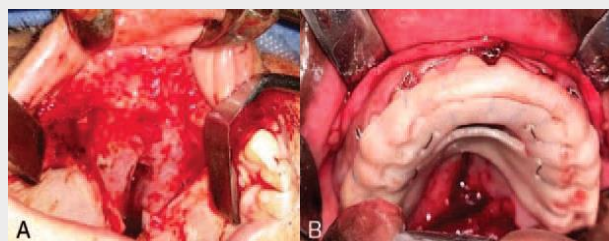


Fig. 1 A. Access for Tumor Resection.

Fig. 1 B. Fixation of the surgical splint with the palatal bar.

Hypotensive general anesthesia, orotracheal intubation is performed, the authors recommend using a submental derivation.

Previous local anesthesia, a mucoperiosteic incision is made in the buccal mucosa from the first right molar to the first left molar, to skeletonize the middle facial third

A conventional Lefort I osteotomy is performed, which can vary depending on the tumor localization.

Another incision in the soft tissue of the oropharynx is performed in the midline bordering the uvula's base. Once the 2-halves of the maxilla are separated, the access for tumor resection will be available (Fig 1 A).

After removing the tumor, the dural reconstruction is performed with fatty tissue graft from the buccal fat pad. Then the repositioning of the maxilla is achieved with the help of a surgical splint, intermaxillary fixation, and rigid internal fixation (Fig. 1B).

POST-OPERATIVE CARE

- The surgical splint with the palatal bar is fixed with interdental wires for a period of 8 weeks, to avoid transverse collapses.
- Medical treatment: antibiotic therapy along with NSAIDs, nasal decongestants and antiallergics for a period of 10 days.
- Proper oral hygiene through conventional brushing and locoregional irrigations with 0.9% saline.
- A hypercaloric and hyperproteic liquid diet during the first 3 weeks, then soft diet until the 8th week.
- The patient is not allowed to blow his/her nose for a period of 8 weeks.

CONCLUSION

The Lefort I osteotomy with or without mid-palatal osteotomy to access the skull base allows a great visualization, making removal of lesions easier under direct vision to achieve free surgical margins. Additional benefits of this transoral approach are preservation of function and cosmesis.

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