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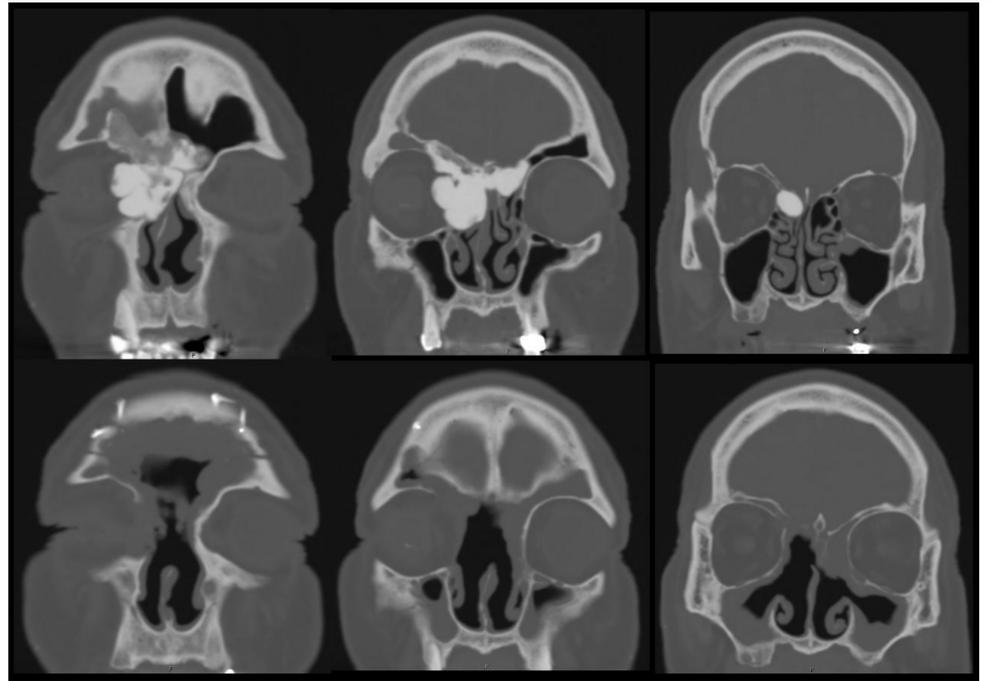
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Background

- Giant skull base osteomas may involve the sinonasal cavity, orbit and anterior cranial fossa
- Single-corridor approaches can limit visualization and mobilization, particularly in high-risk areas
- Combined approaches can improve visualization and surgical safety

Clinical Presentation

- 70-year-old male with progressive right medial orbital wall swelling and pressure
- Remote history of right vision loss secondary to complications from cataract surgery
- CT demonstrating multifocal osteoma with anterior table, orbit, and sinonasal cavity involvement. No other sinonasal pathology.



Pre-operative (top) and post-operative (bottom) CT sinuses

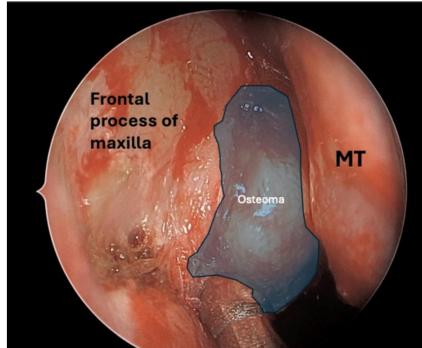
Key Operative Steps

STEP 1 – TRANSFRONTAL APPROACH



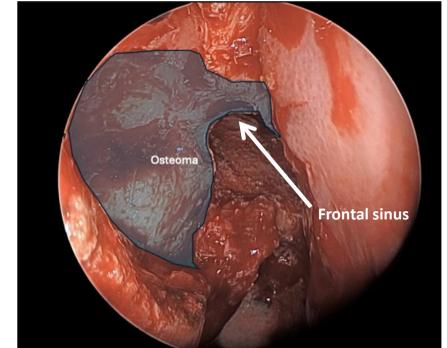
Osteoplastic flap elevated with identification of the osteoma within the frontal sinus

STEP 2 – TRANSNASAL CORRIDOR



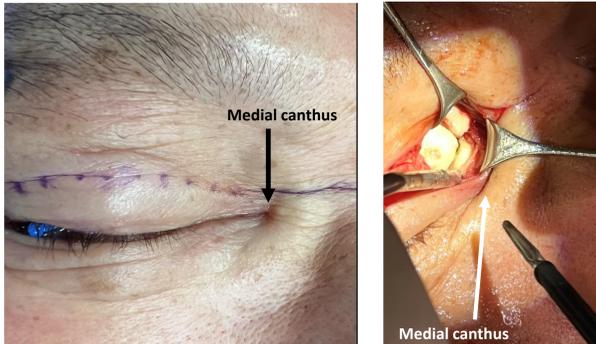
Bilateral endoscopic sinus surgery exposing intranasal osteoma

STEP 3 – EXTENDED FRONTAL APPROACH



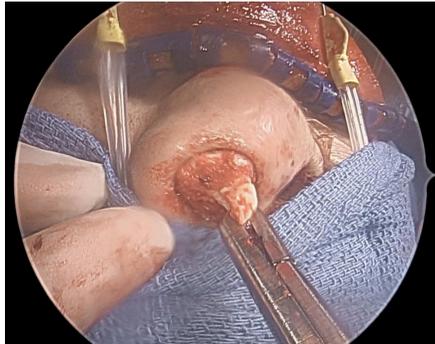
Debulking of osteoma and identification of posterior table

STEP 4 – TRANSORBITAL MOBILIZATION



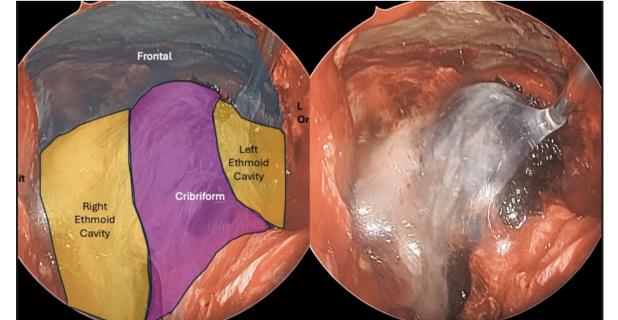
Lid-crease incision to medial orbital component

STEP 5 – CIRCUMFERENTIAL RESECTION



Progressive mobilization and resection through combined corridors

STEP 6 – SKULL BASE RECONSTRUCTION



CSF leak repair with free mucosal graft and multilayer support

Surgical Pearls

- Multi-corridor access enables circumferential tumor dissection
- Transorbital approach improves visualization of medial orbital disease
- Draf III facilitates posterior table inspection and resection
- Multidisciplinary planning enhances safety and post-operative outcomes in skull base surgery

Post-Operative Course

- CT confirmed gross tumor resection
- No post-operative complications

Conclusion

- Combined transfrontal, transnasal and transorbital approaches allow safe, complete resection of giant skull base osteomas while preserving critical anatomy and minimizing morbidity

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References

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