

# Team-Based Endoscopic Management of a Sino-orbito-nasal Osteoma with Vascularized Flap Reconstruction



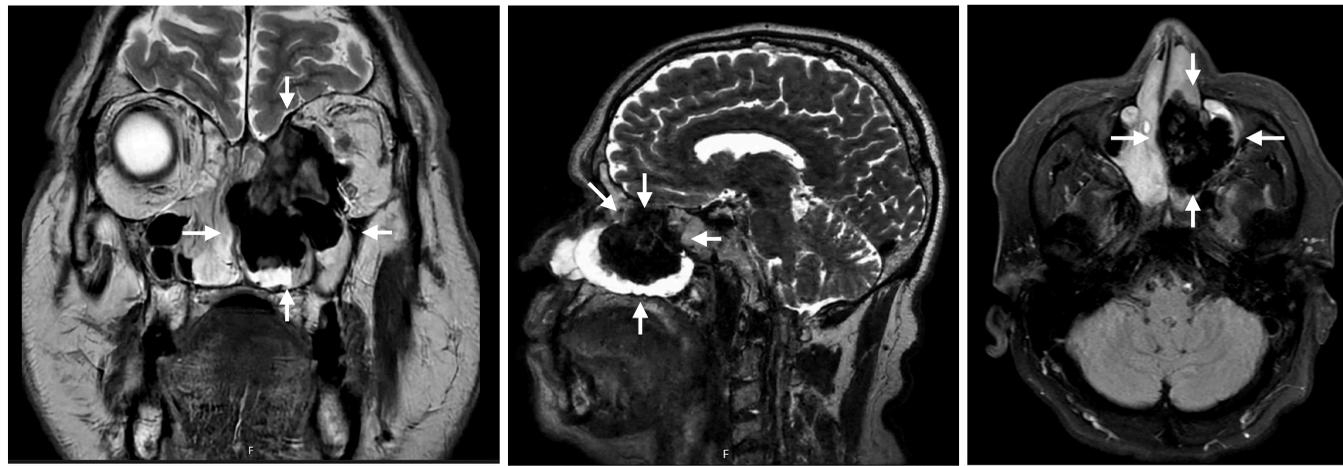
UC San Diego Health

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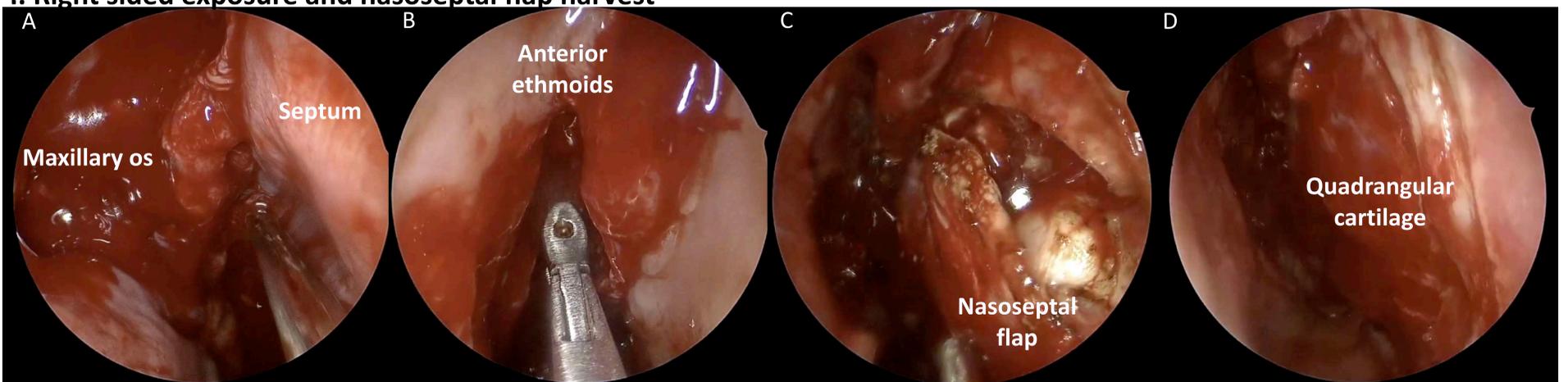
## Key Points

**Patient:** 67-year-old male with sino-orbito-nasal osteoma  
**Imaging:** Left maxillary sinus involvement with extension into the orbit and anterior skull base  
**Surgery:** Multidisciplinary expanded endoscopic endonasal transpterygoid-transmaxillary-transorbital approach with gross total resection  
**Reconstruction:** Orbital implant, right nasoseptal flap, left inferior turbinate flap  
**Outcome:** Discharged POD 2 without complications. At 4 month follow-up, diplopia markedly improved.

**Figure 1.** 4.6 by 5.1 by 3.8 cm osteoma, extending into the medial and inferior orbit and the anterior skull base at the cribriform

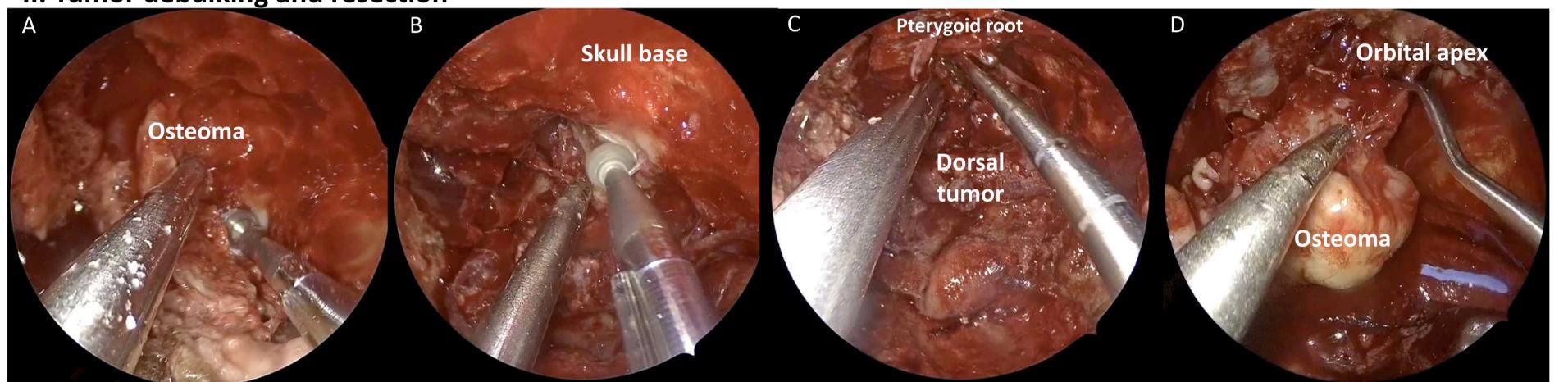


## I. Right sided exposure and nasoseptal flap harvest



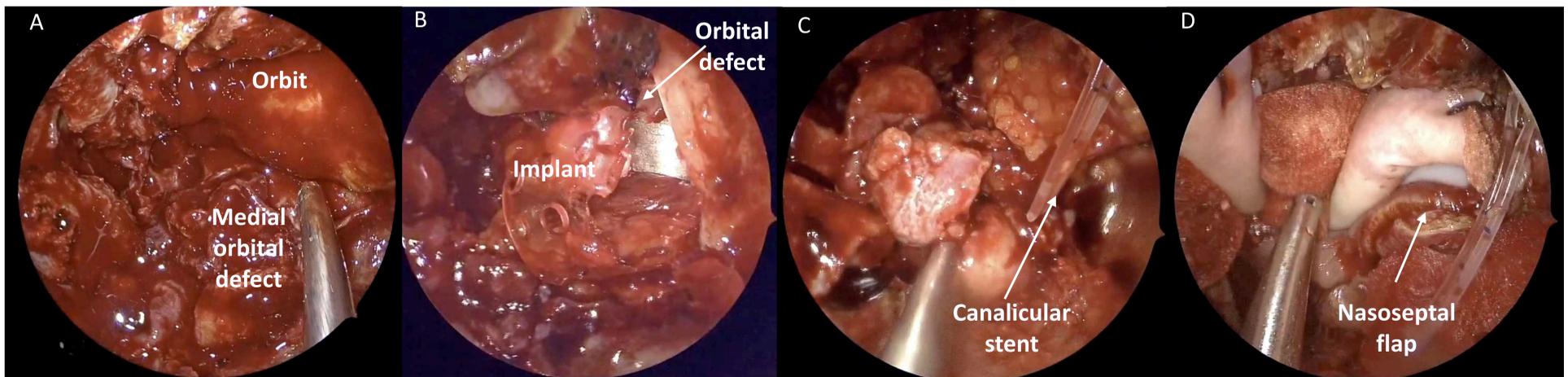
**Figure 2** - Right sided maxillary antrostomy (A), ethmoidectomy (B), sphenoidotomy, harvest of nasoseptal flap (C), and septectomy

## II. Tumor debulking and resection



**Figure 3** - Debulking of osteoma occupying the left nasal cavity (A), cribriform plate/orbital apex (B) and pterygoid root (C) until gross total resection achieved (C)

## III. Orbital defect reconstruction



**Figure 4** - Reconstruction of inferomedial orbital defect (A) using orbital implant (B), lacrimal stents to restore flow after nasolacrimal duct transection (C), and right sided nasoseptal flap, inferior turbinate flap, along with synthetic material (D)

## Discussion

This case highlights that extensive ossified sino-orbito-nasal masses involving the orbit and anterior skull base can be successfully treated through a purely endoscopic, multidisciplinary approach, achieving gross total resection with minimal morbidity. Strategic use of expanded endonasal corridors and layered reconstruction enables rapid recovery while preserving orbital function and improving symptoms.