

## OVERVIEW

A 68-year-old male patient with a history of Stage 4b squamous cell carcinoma of the left maxillary sinus was transferred to our care for the management of CSF leak and meningitis.

He had been treated with chemotherapy and proton beam therapy, with no evident signs of residual tumor or recurrence on previous CT scans and MRI.

Upon further physical examination and imaging, he had erosive changes of the posterosuperior left maxillary sinus wall consistent with osteoradionecrosis, and clear rhinorrhea that was positive for Beta-2 transferrin.

In addition to intravenous antibiotics, surgical intervention was required to reconstruct the middle cranial fossa defect exposing the temporal lobe.

The defect was repaired using a contralateral nasoseptal flap.

Postoperative follow up at 6 months showed a well healed reconstructive field, with no signs of tumor recurrence, and no CSF leak.

## PREOPERATIVE IMAGING

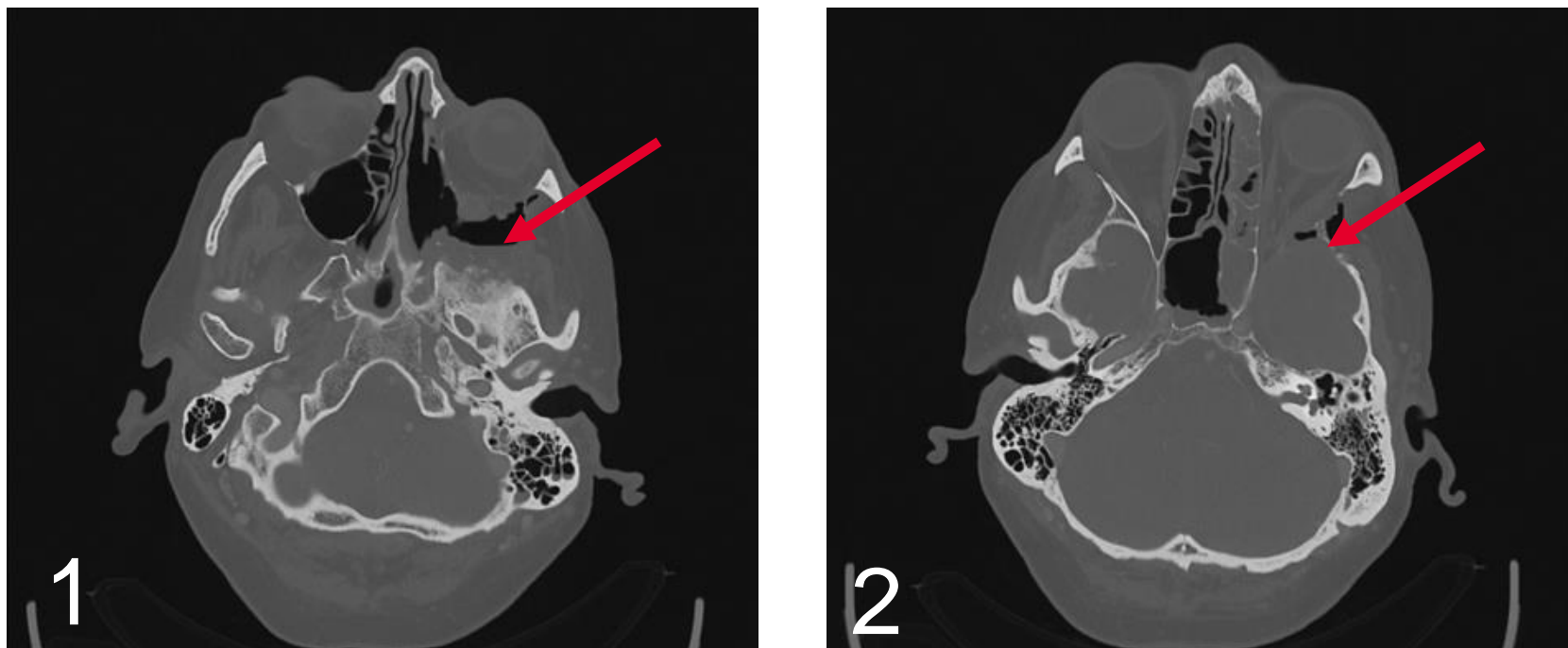
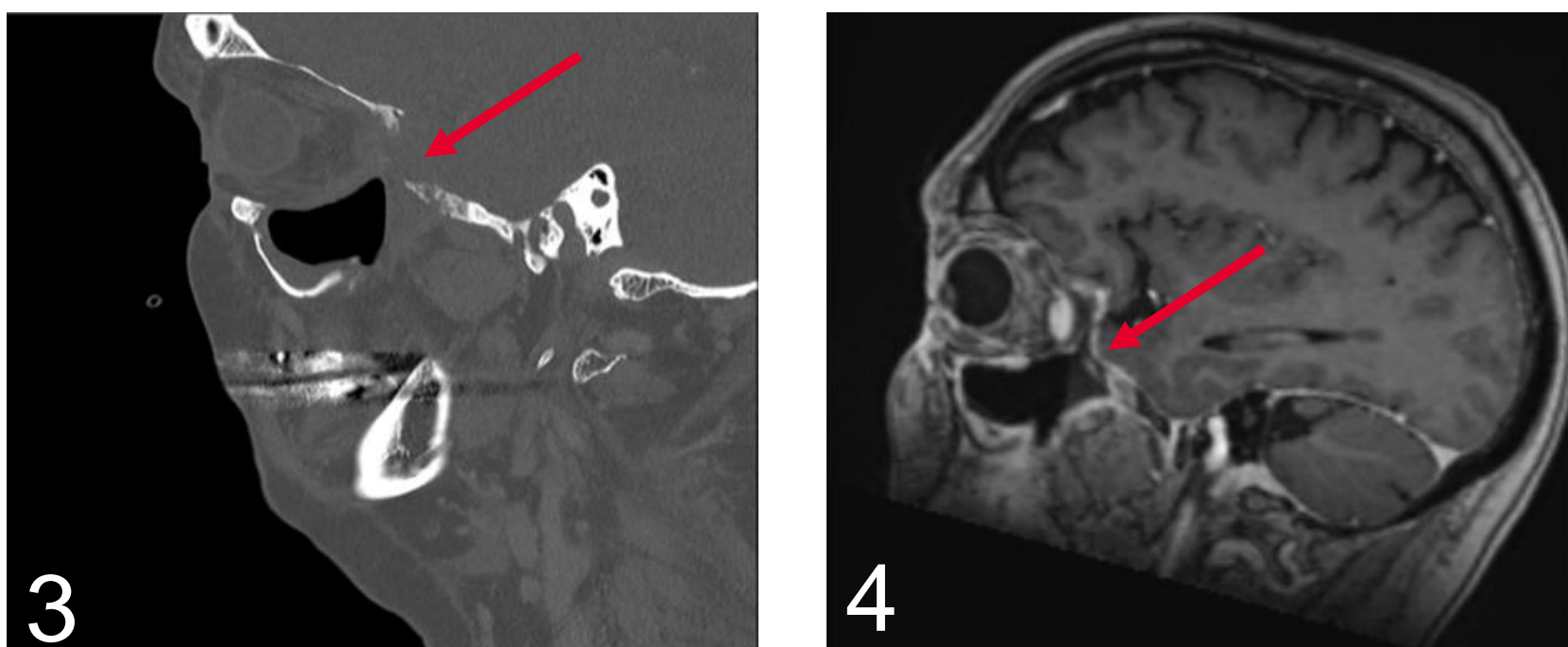
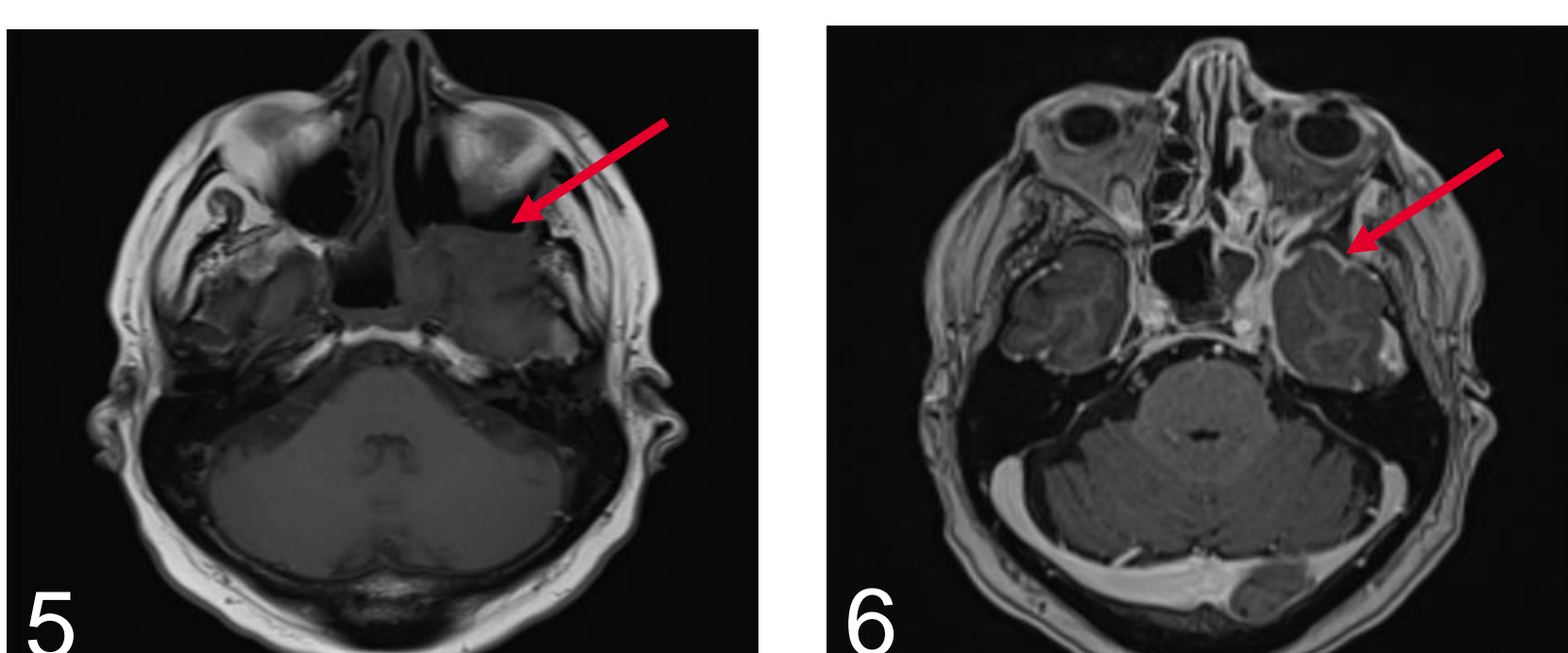


Figure 1 and 2. Axial CT images showing erosive changes of posterosuperior maxillary wall sinus

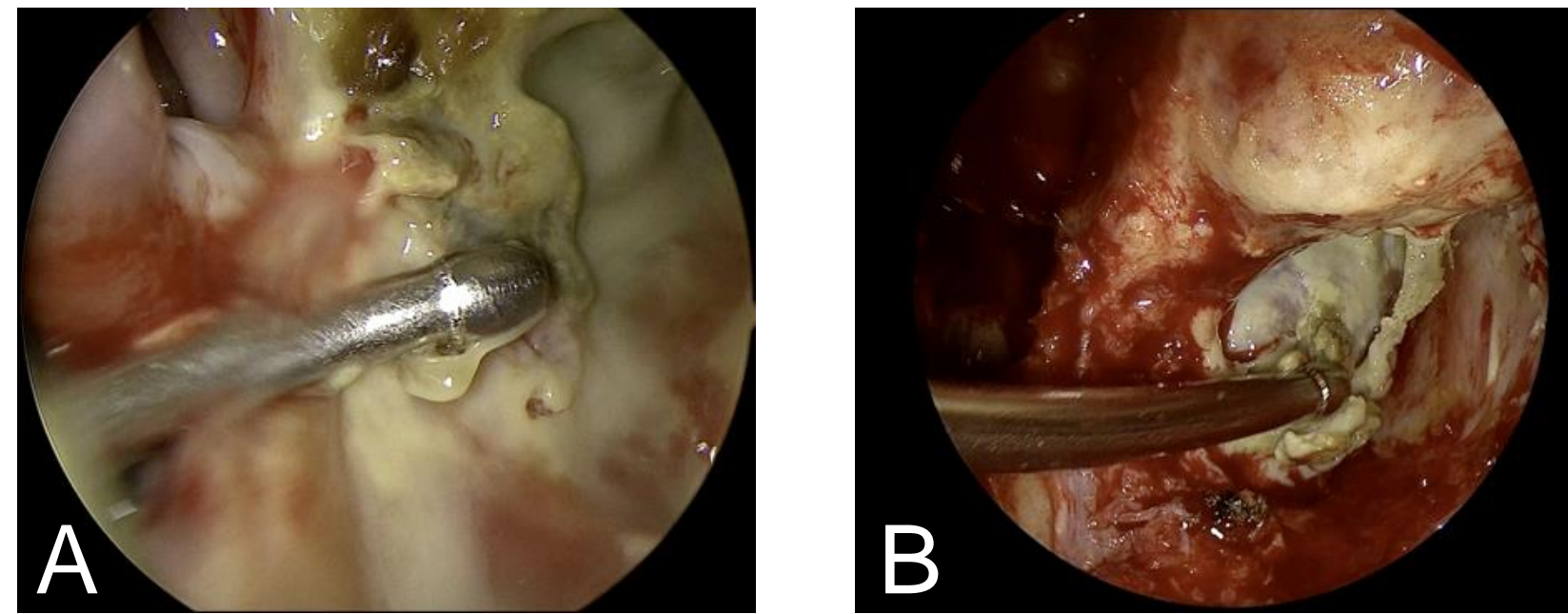


Figures 3 and 4. Sagittal CT and MR images showing temporal lobe herniating towards the maxillary sinus



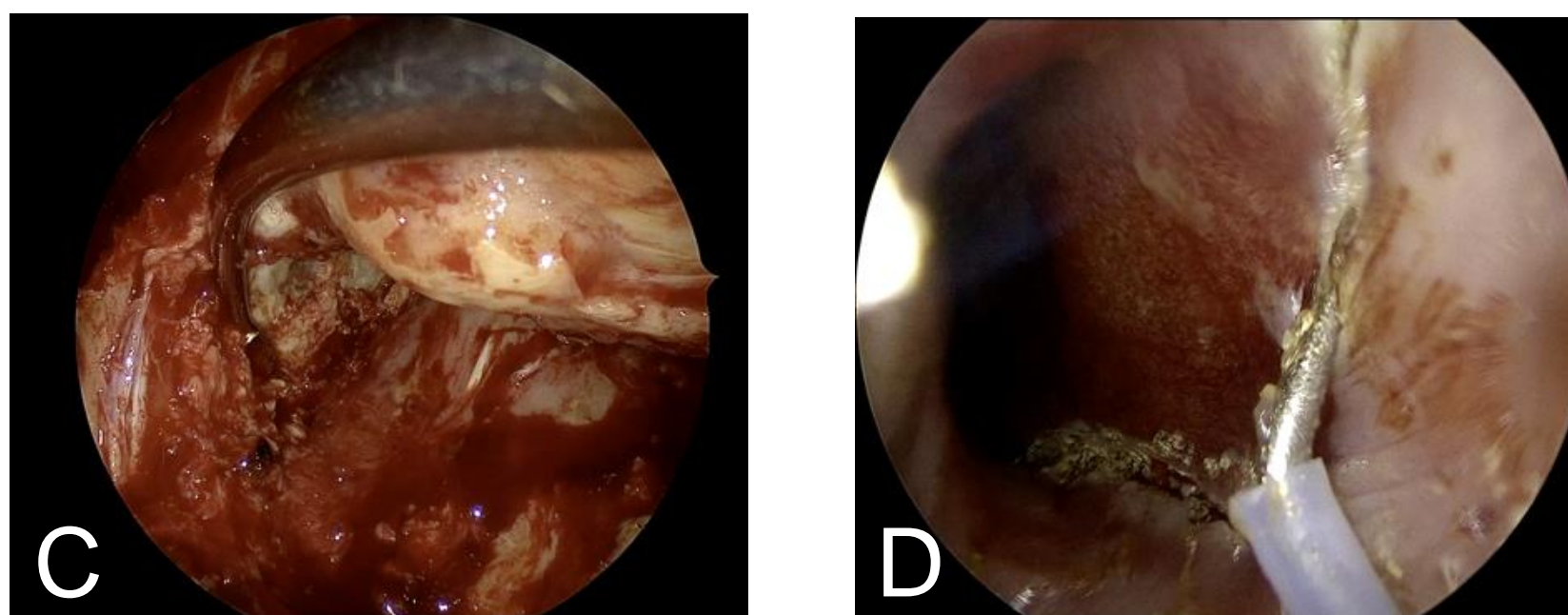
Figures 5 and 6. Axial MR images showing exposed temporal lobe in the left maxillary sinus

## OPERATIVE TECHNIQUE



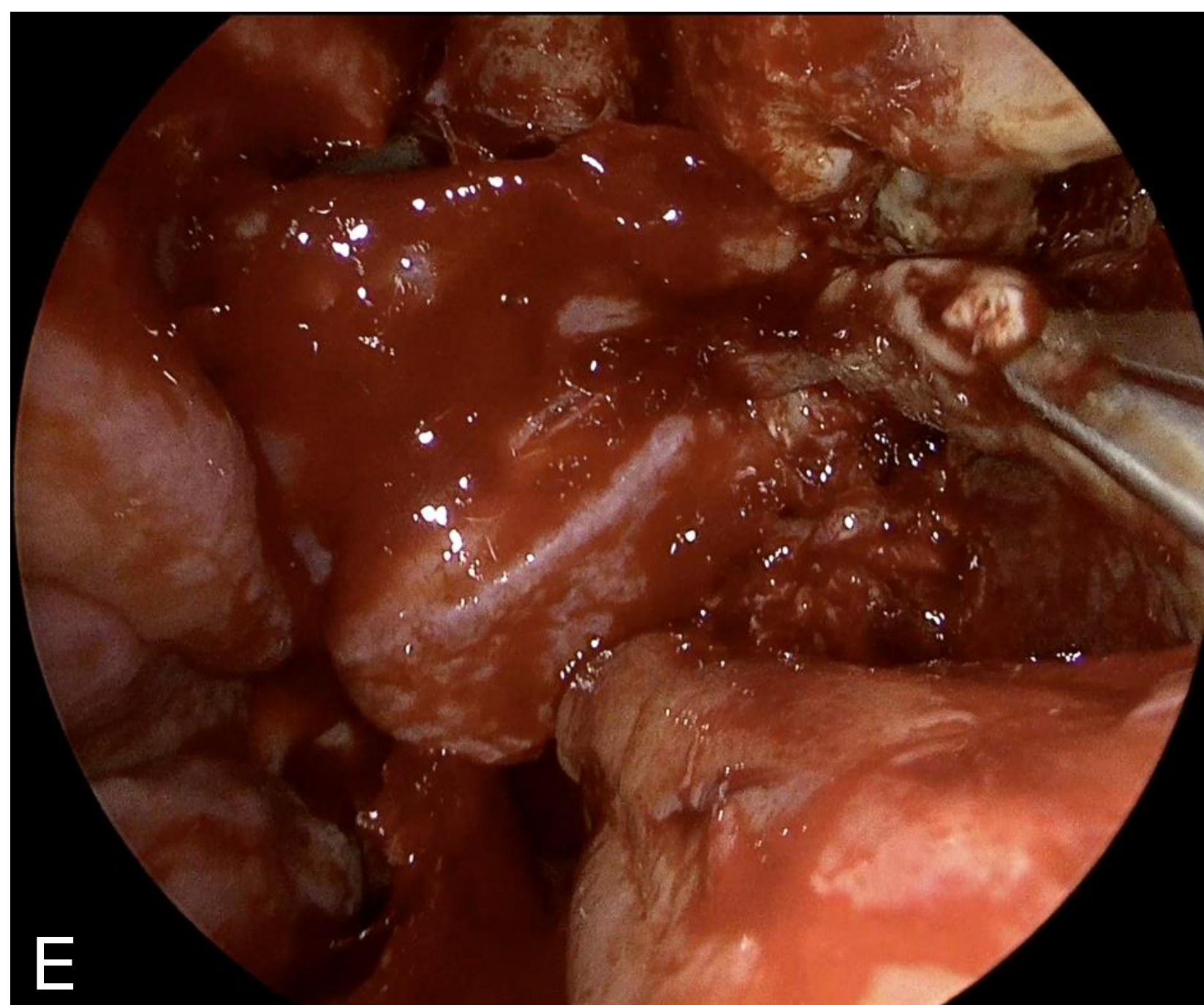
A – Examination of the nasal cavity and exposure of middle cranial fossa defect

B – Debridement of exposed dura and bone using a frontal suction

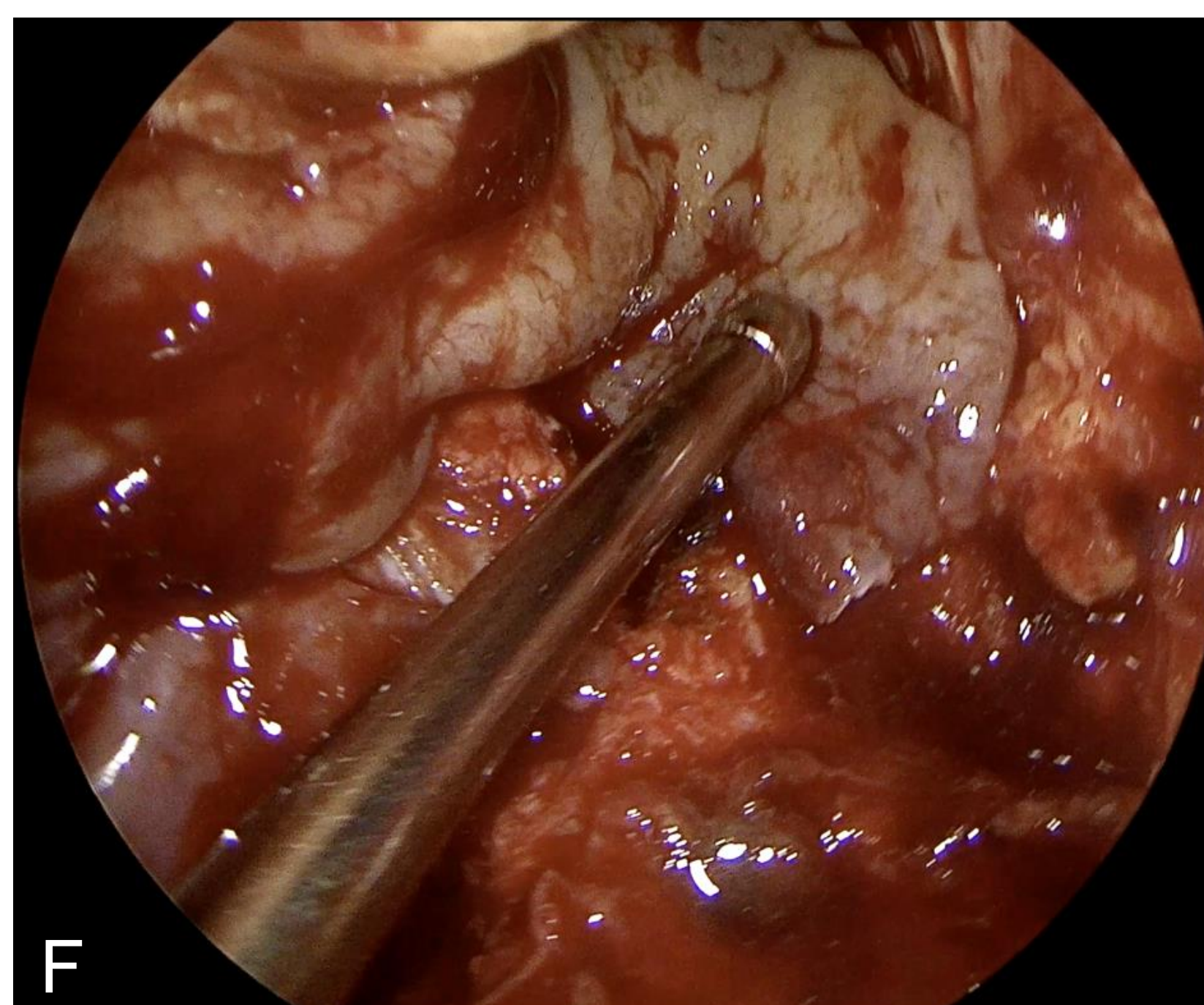


C – Debridement using a 45-degree curette

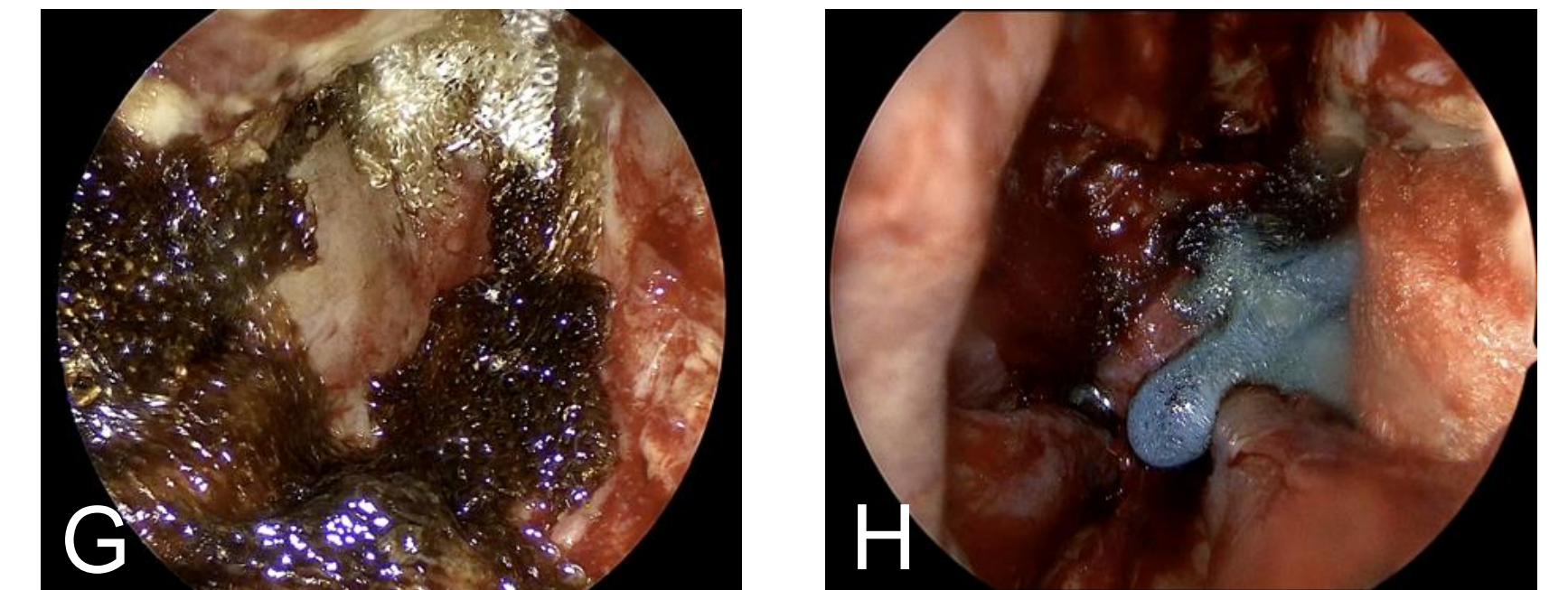
D – Anterior incisions of the contralateral Nasoseptal flap



E – Mobilizing the Nasoseptal flap into the maxillary sinus using a straight Blakesley



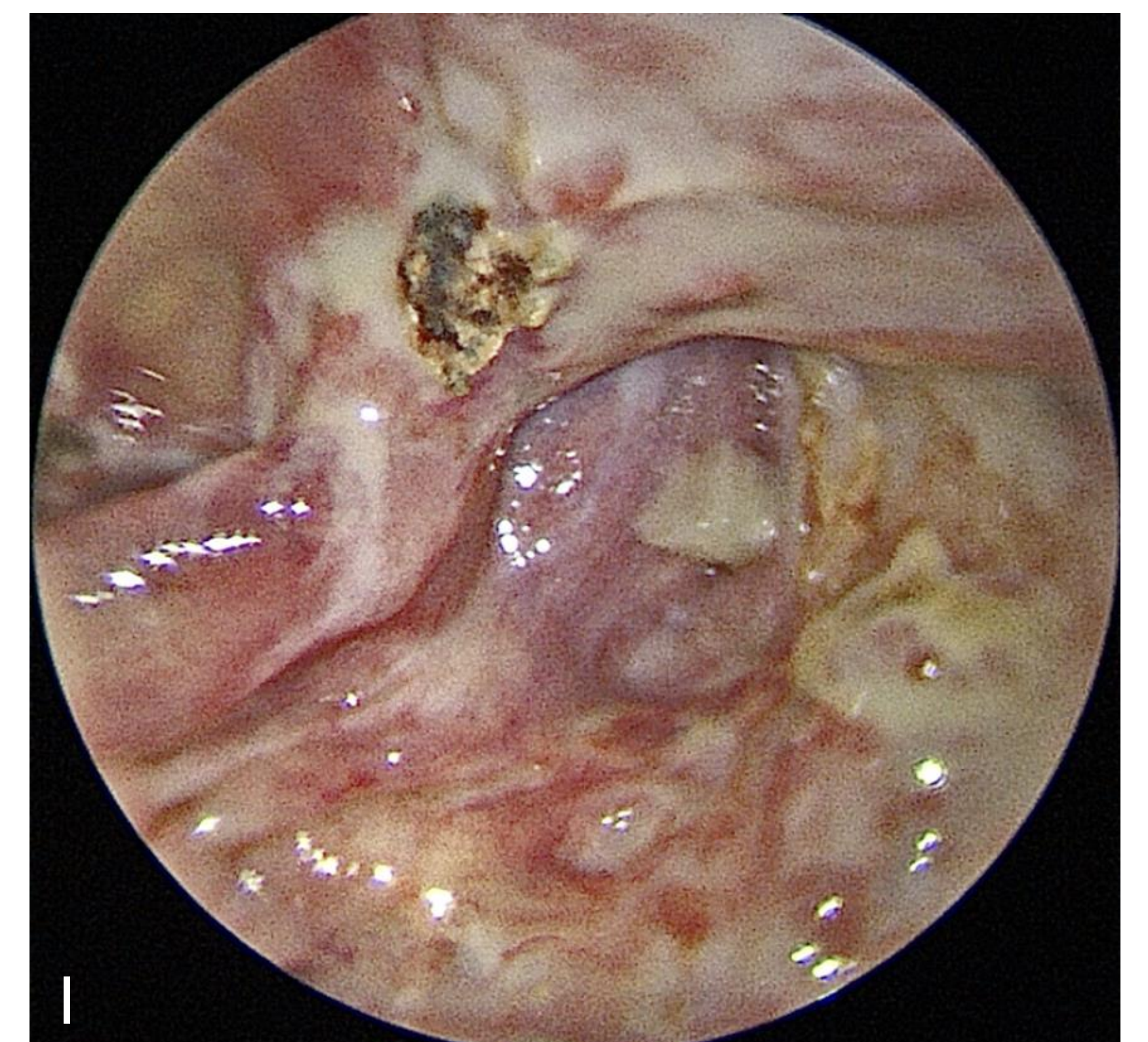
F – View with a 45-degree endoscope. Careful positioning of the Nasoseptal Flap posterosuperiorly covering the entire middle cranial fossa defect



G – Framing the edges of the Nasoseptal flap with absorbable oxidized cellulose polymer

H – Reconstructive support with dural sealant and absorbable packing

## POSTOPERATIVE FINDINGS



I – Successful reconstruction at 6 months follow up. No signs of tumor recurrence, and no CSF leak

## SCAN TO WATCH VIDEO

