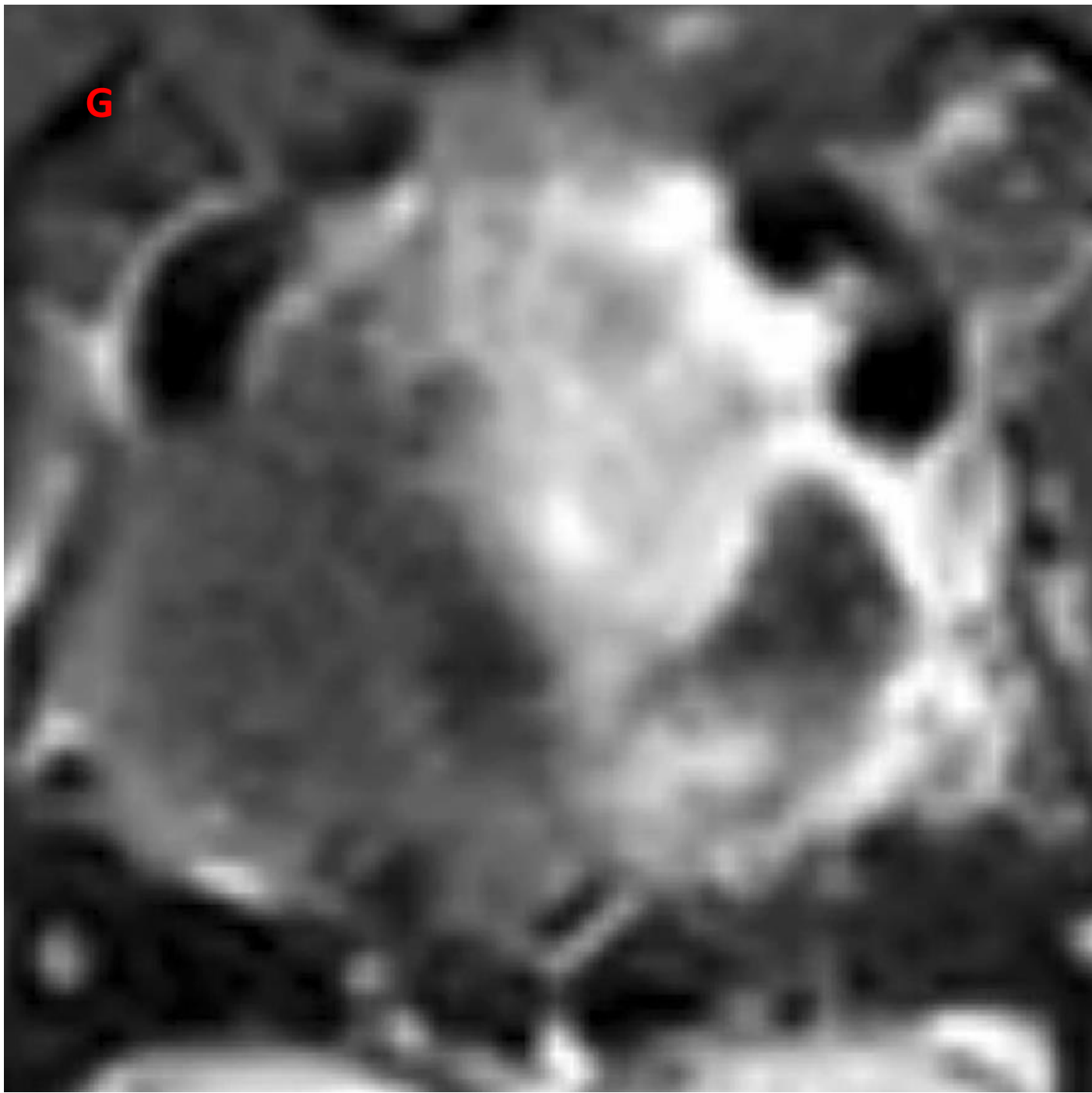
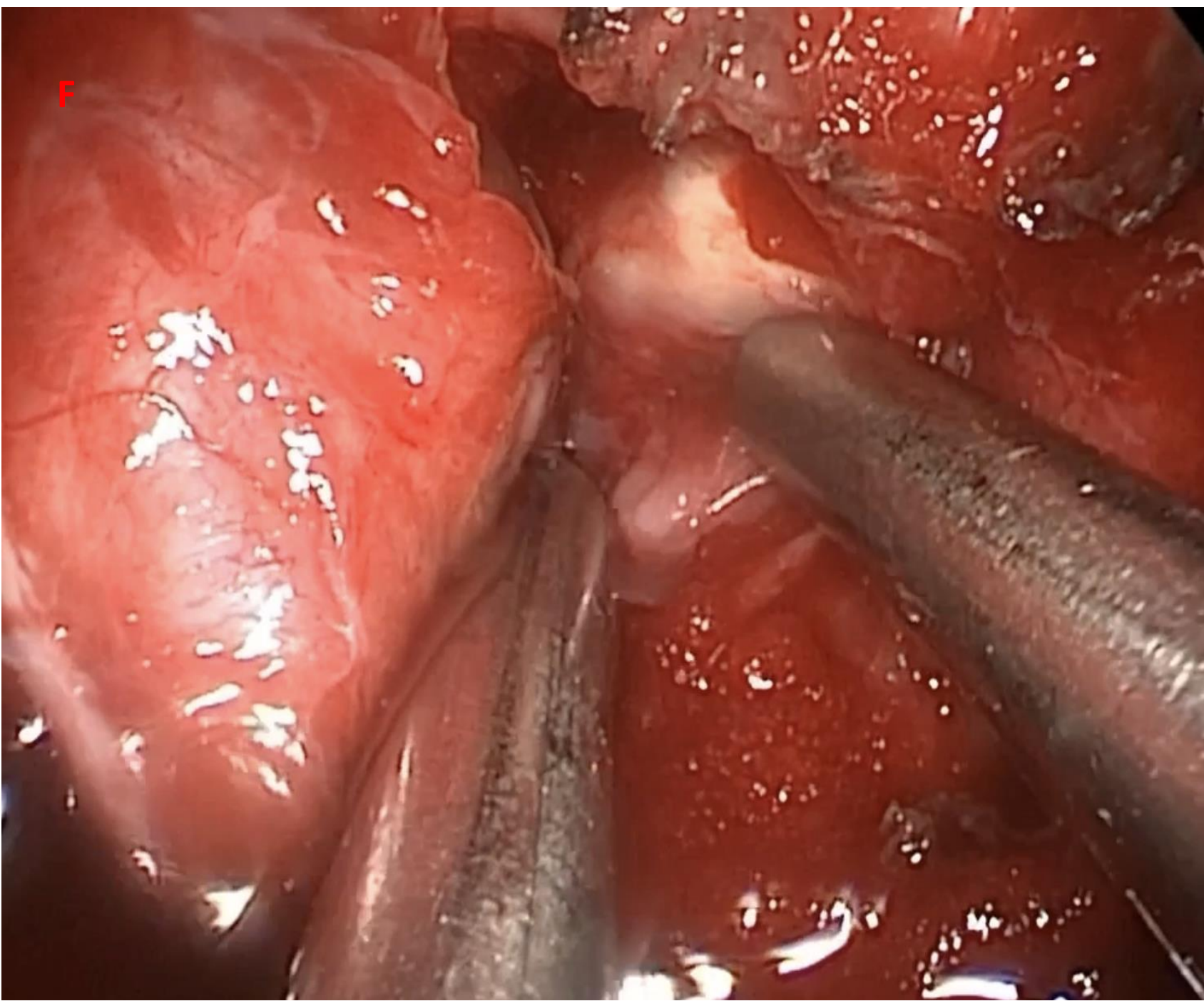
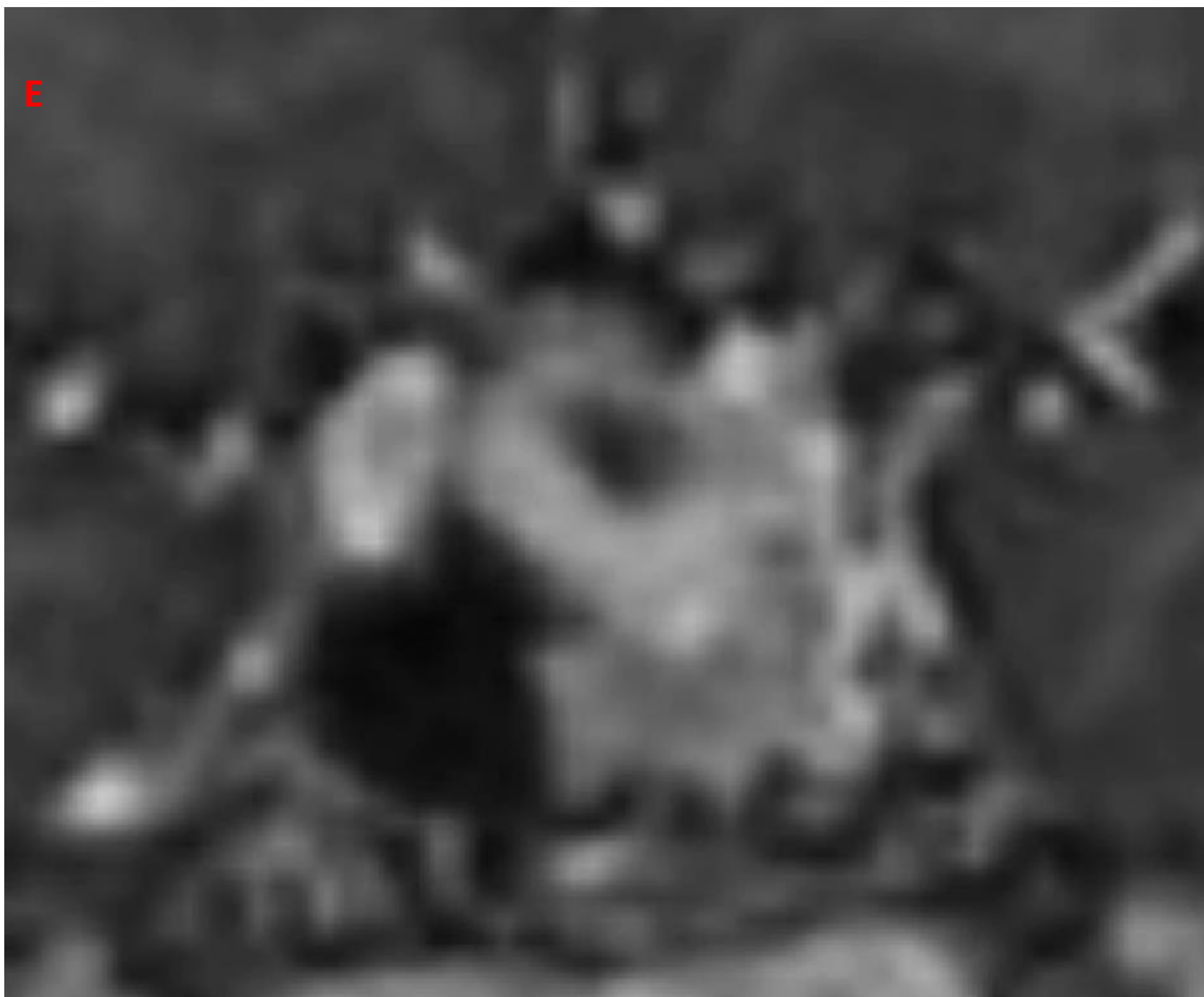
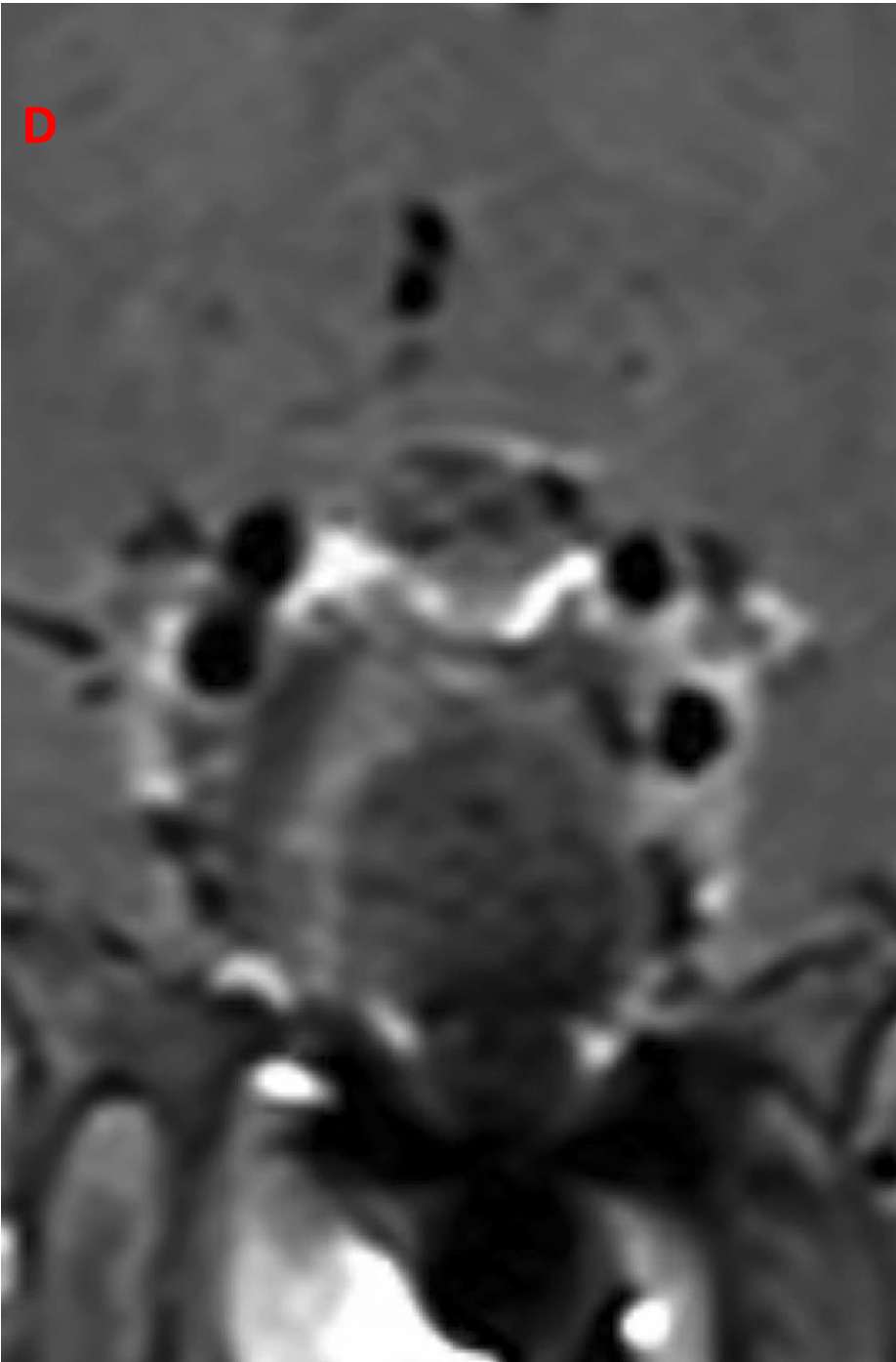
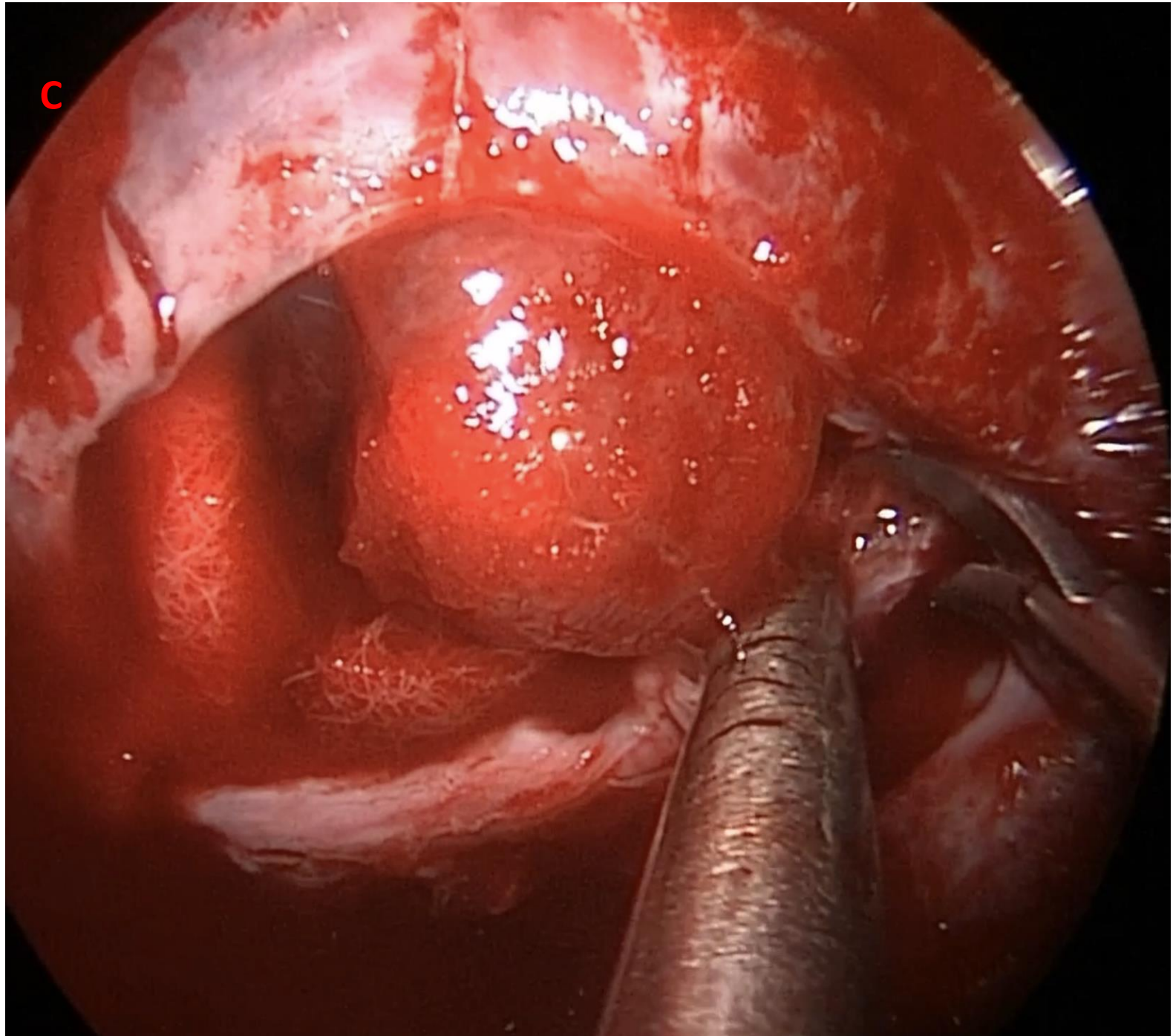
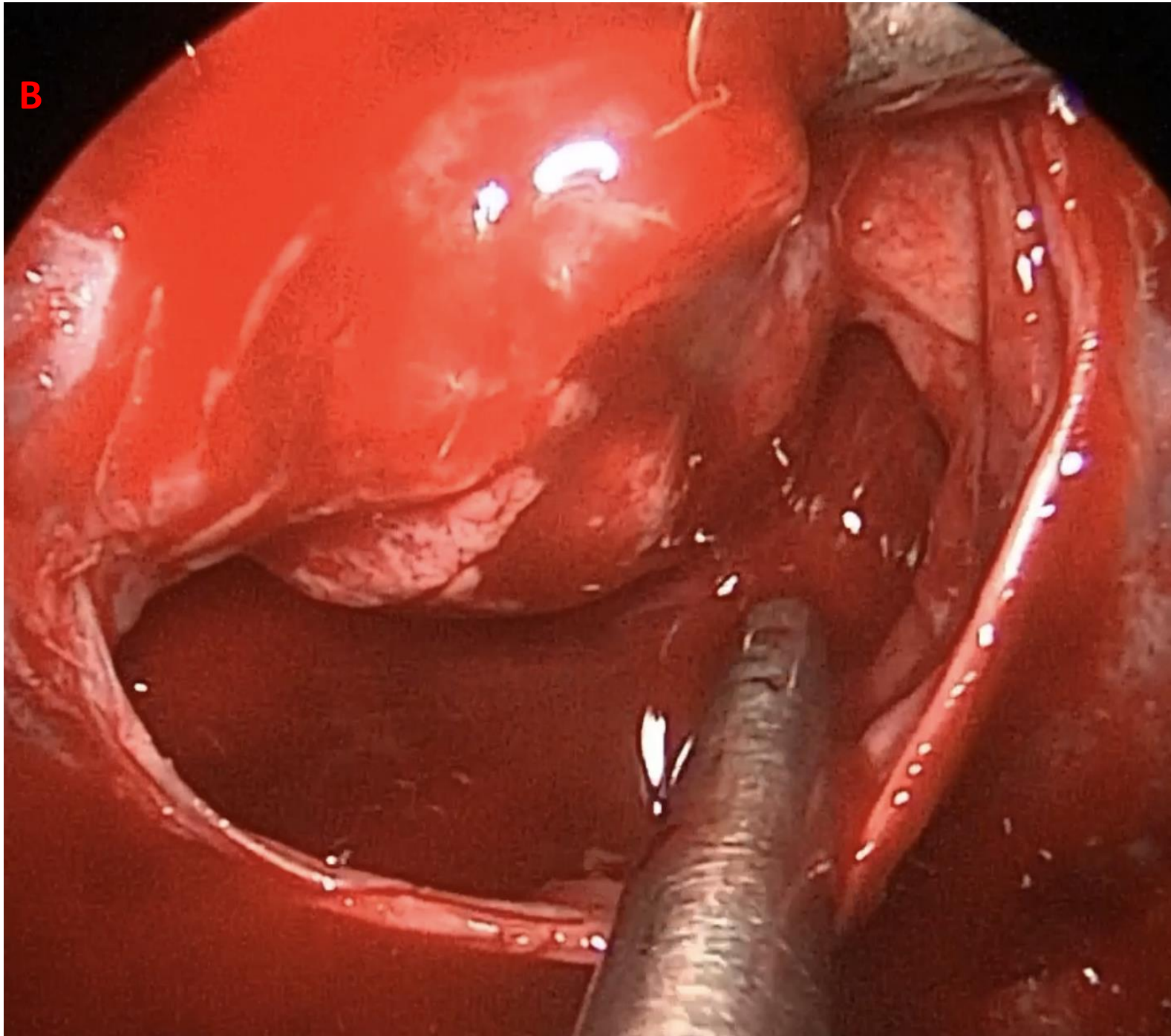




Functioning adenoma with cavernous invasion - managing cavernous sinus disease as new faculty

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Introduction

Functioning adenomas present significant surgical challenge specially when they invade into the cavernous sinus. Safe tumor resection from cavernous sinus is critical in achieving biochemical remission. For new skull base faculty, these can be challenging cases to deal with. Here, we share out experience from first 6 months in faculty position.

Methods and Materials

A retrospective analysis of the cases performed by the author in past 6 months were reviewed and 6 cases of functioning adenomas with cavernous invasion were identified. Two case examples are shown above.

Results

First patient (Fig. A-D) was a 42yr old female presenting with acromegaly. A giant macroadenoma with possible cavernous sinus wall invasion was identified. An expanded endoscopic endonasal approach (EEA) was adopted. Fig. B shows a two suction technique for tumor resection along the walls of the cavernous sinus.

Results

Although the cavernous wall was found to be intact without any obvious breakthrough or invasion, it is well established that growth hormone secreting adenomas tend to invade the cavernous sinus wall microscopically. Therefore, it was decided to resect the medial cavernous wall on both sides and were found to be positive for tumor histologically. Patient tolerated the procedure well with excellent post-op biochemical response. No CSF leak was identified and she was discharged from the hospital on Post-op day 2. Second patient (Fig. E-G) was a 45yr old female who presented with Cushings and found to have an adenoma involving the left superior, inferior and medial compartment of cavernous sinus. Again an expanded EEA was adopted. Contrary to first example, the tumor had grossly invaded through the cavernous wall. This require careful attention to all segments of cavernous sinus for complete tumor resection to achieve remission. Using a two suction technique, tumor was meticulously removed from all compartments of cavernous sinus along the carotid artery. Gross total resection was obtained. Patient tolerated the procedure very well and is in remission.

Discussion

Cavernous sinus disease presents a technically challenging scenario for new skull base faculty coming out of fellowship. Each patient should be individually assessed for possible risks and complications of chasing the tumor in cavernous sinus. Familiarity with cavernous sinus anatomy and experience in fellowship are critical in handling such complex cases. An experienced ENT partner also helps by providing continuous and clean visualization needed to perform these cases.

Conclusions

Functioning pituitary adenomas with cavernous sinus invasion can be safely managed by new faculty member out of fellowship but prior experience in fellowship helps in dealing with cases.

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