



Methods

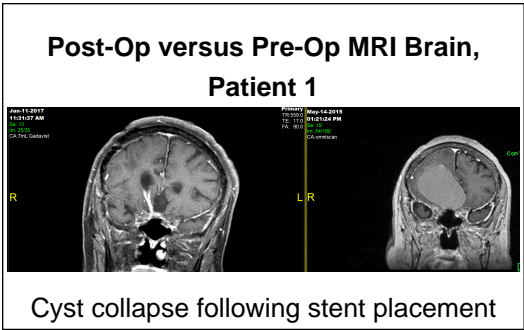
Patients undergoing neuroendoscopic transsphenoidal fenestration of RCCs with BASE-stent placement were identified and their medical records retrospectively reviewed.

Learning Objectives

- (1) Review bioabsorbable steroid-eluting stents; their development; and their efficacy in functional endoscopic sinus surgery.
- (2) Discuss the technical steps to augment neuroendoscopic transsphenoidal cyst fenestration with bioabsorbable steroid-eluting stent placement

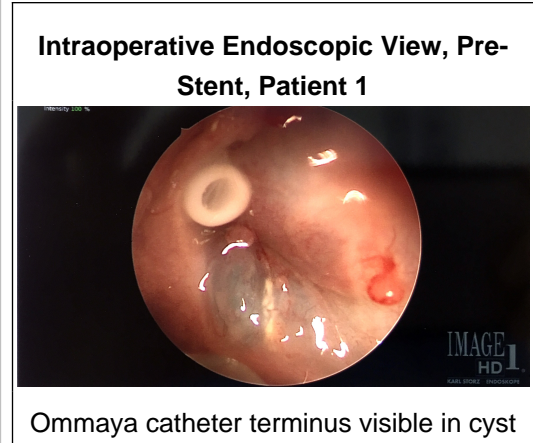
Introduction

Rathke’s cleft cysts (RCCs) are common benign skull-base lesions arising from embryologic remnants of Rathke’s pouch. Though frequently asymptomatic, RCCs can become symptomatic due to compression of adjacent neural structures. Both transcranial and neuroendoscopic surgical treatments have been described for symptomatic RCCs but recurrence rates remain as high as 30%. Bioabsorbable steroid-eluting (BASE) stents significantly decrease adhesions and recurrent ostia obstruction following endoscopic sinus surgery for chronic sinusitis. We present our initial experience with endoscopic-endonasal fenestration and placement of BASE-stents for RCCs.

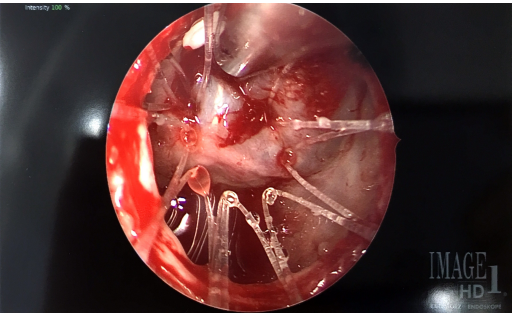


Results

Two patients underwent neuroendoscopic transsphenoidal RCC fenestration and BASE-stent placement from 3/2016 to 3/2018. A 79-year old woman presented 31-years status-post transcranial RCC resection with a symptomatic 5x6cm RCC recurrence initially managed with stereotactic cyst aspiration and Ommaya reservoir placement. A 3 x 3cm cyst persisted despite repeated reservoir aspirations. A 24-year old woman presented with subacute left monocular vision loss and a 1.9 x 2cm RCC. Both patients underwent neuroendoscopic transsphenoidal cyst fenestration and a BASE stent was deployed in the sella opening to prevent cyst wall regrowth or closure without complication. Both patients had symptomatic resolution postoperatively and demonstrated epithelialization of the cyst wall opening and marsupialization into the sphenoid sinus at 2-3 month endoscopic evaluations. Both patients remain asymptomatic with return of baseline visual function and without radiographic evidence of RCC recurrence at 24- and 6-month follow up, respectively.

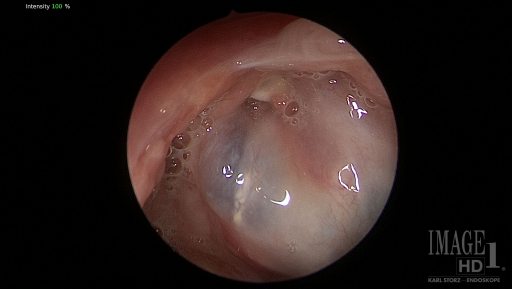


Intraoperative Endoscopic View, Post-Stent, Patient 1



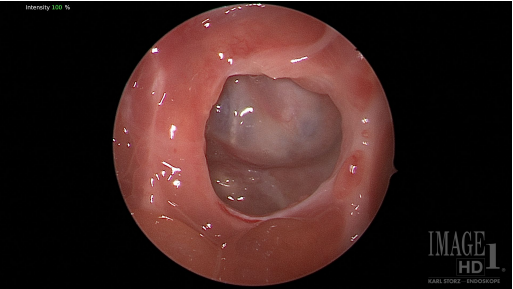
Bioabsorbable steroid-eluting stent placement

1-Month Endoscopic F/U, Patient 1



Early endothelialization; ommaya reservoir visible from below.

3-Month Endoscopic F/U, Patient 1, High Mag

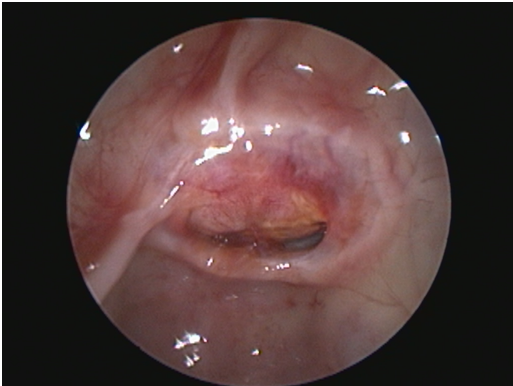


Endothelialization and marsupialization of cyst wall to sphenoid sinus

Conclusions

Bioabsorbable steroid-eluting stent placement is a safe, viable, less-invasive augmentation of neuroendoscopic technique for symptomatic and surgically-recalcitrant Rathke’s cleft cysts with the potential to reduce recurrence rates.

2-Month Endoscopic F/U, Patient 2



Endothelialization and marsupialization of cyst wall to sphenoid sinus

References

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