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Successful endoscopic transsphenoidal resection of suprasellar mass in two pediatric patients with non-pneumatization of the sphenoid sinus

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Introduction

Non-pneumatization of the sphenoid sinus was once considered a contraindication to endoscopic resection of sellar/suprasellar masses due to obscuration of anatomical landmarks. Studies have since reported safe endoscopic resection of sellar masses in adult patients with this condition; however, there has been limited data on this approach in the corresponding pediatric population. We present two cases of successful endoscopic transsphenoidal resection in pediatric patients with non-pneumatization of the sphenoid sinus. bs ft

Case Overview

Both patients were 4 years old at the time of diagnosis, and were noted to have non-pneumatization of the sphenoid sinus due to their young age. Patient #1 presented with short stature and was found to have a 1.5cm sellar/suprasellar mass (Fig 1). Patient #2 presented with vision changes and was found to have a 5cm sellar/suprasellar mass extending to the third ventricle (Fig 2). Intraoperatively, a posterior septectomy was performed and the sellar region was accessed endoscopically by drilling through the sphenoid rostrum with cutting and diamond burrs. A nasoseptal flap was used to close.

Results

There were no intraoperative or postoperative complications, and post-operative ophthalmologic exam was unchanged. Patient #1 had gross total resection of a Rathke Cleft Cyst on post-operative imaging and pathology (Fig 3). Final pathology for patient #2 was WHO Grade I craniopharyngioma, and he was referred for radiation therapy (Fig 4).

Conclusion

Endoscopic transsphenoidal resection is a safe and effective approach for pediatric patients with non-pneumatization of the sphenoid sinus.

Figure 1. Preoperative Imaging for Patient #1. Contrast-Enhanced MRI Brain in the T1 post-contrast series in coronal (A) and sagittal (B) views.

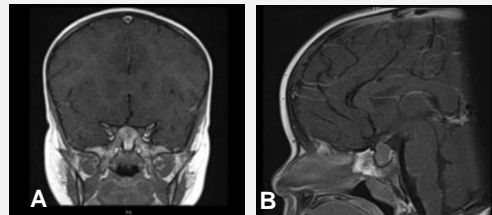


Figure 2. Postoperative Imaging for Patient #1. Contrast-Enhanced MRI Brain in the T1 post-contrast series in coronal (A) and sagittal (B) views.

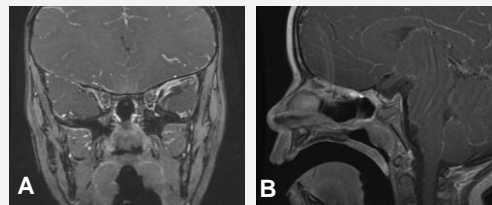


Figure 1. Preoperative Imaging for Patient #2. Contrast-Enhanced MRI Brain in the T1 post-contrast series in coronal (A) and sagittal (B) views.

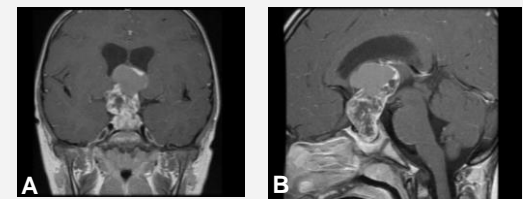


Figure 2. Postoperative Imaging for Patient #2. Contrast-Enhanced MRI Brain in the T1 post-contrast series in coronal (A) and sagittal (B) views.

