

alternative for addressing skull base tumours. This study aims to showcase our institution's extensive experience with ETOA, detailing the surgical technique employed and presenting comprehensive patient outcomes. **Methods:** A retrospective analysis was conducted on data from patients who underwent ETOA within the past five years. **Results:** Over the study period, 24 ETOA procedures were performed on 21 patients, with an average age of 48.92, 13 of whom were women. The superior orbital corridor was utilized in 95.83% of cases, and in 79.17%, ETOA was complemented by a transnasal approach. Sphenoidal meningioma accounted for the most common surgical indication (33.33%, n=8), all resulting in vision improvement, followed by lateral frontal sinus mucocele (25%, n=6). The median length of stay was one day, and ETOA achieved the procedure goal in 19 patients. Transient V1 numbness was the primary complication (29.17%, n=7), and 20.83% (n=5) necessitated another surgery. Notably, no mortality was associated with this procedure. **Conclusions:** Our institution's experience underscores the notable safety and efficacy potential of ETOA, with 19 out of 21 patients exhibiting positive outcomes, obviating the need for revision surgery in most cases.

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The use of intraoperative magnetic resonance imaging for endoscopic transnasal transsphenoid surgery in children

N Balasubramaniam (Laval) M Tewfik (Montreal) J Shwartz (Montreal) S Daniel (Montreal) T McHugh (Montreal) R Dudley (Montreal)*

doi: 10.1017/cjn.2024.243

Background: Sellar and suprasellar pediatric lesions are uncommon. Endoscopic transnasal transsphenoidal surgery (ETTS) is the preferred treatment, but early post-op MRI is hindered by sphenoidal packing. This study aims to assess iMRI safety and efficacy in pediatric ETTS cases. **Methods:** We performed a retrospective review from Jan 01, 2015 to Dec 31, 2022, evaluating use of iMRI. We determined if the goals of the surgery (biopsy, cyst decompression, subtotal resection, gross total resection) were met, and iMRI's influence on surgery outcomes. We examined patient age, surgery duration, length of stay, histopathology results, surgical complications, post-op MRIs within 1 month, and tumor progression/recurrence. **Results:** Over eight years, 20 pediatric ETTS procedures, 14 with iMRI, were conducted. Achieving goals in 13 cases, iMRI prompted extra surgery once. Two adenomas progressed, requiring a second surgery, and craniopharyngioma cases had complications, needing further interventions. Hospital stays varied (1-9 days), with a mean surgery duration of 6 hours and 47 minutes. The study underscores iMRI's potential impact, stressing the necessity for more research in pediatric transsphenoidal surgeries. **Conclusions:** While intraoperative MRI in pediatric transsphenoidal surgeries may aid goal verification, this small study doesn't conclusively demonstrate improved

outcomes. Complication rates align with non-IMRI procedures, highlighting the need for further research.

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Safety of same-day discharge following incidental durotomy in tubular microdiscectomy: a retrospective cohort study

E Liu (Saskatoon) S Saeed (Saskatoon) N Coote (Saskatoon) J Su (Saskatoon) P Toyota (Saskatoon) B Newton (Saskatoon) AR Persad (Palo Alto) DR Fourney (Saskatoon)*

doi: 10.1017/cjn.2024.244

Background: Cerebrospinal fluid (CSF) leak is a common complication of minimally invasive tubular microdiscectomy (MIM). However, it is not known whether patients with CSF leak can be safely discharged home the same day. **Methods:** This is a retrospective cohort study of patients with incidental durotomy after MIM from January, 2009 to August, 2023. Patient demographic information, surgery information, CSF leak management, and postoperative outcomes were recorded. **Results:** There were 16 patients (53%) who were admitted to hospital and 14 (47%) patients discharged home the same day post CSF leak. There were no differences in patient demographics between the two groups at baseline. Twenty-nine out of 30 (97%) of the patients had onlay duraplasty, and one (3%) patient was repaired using sutures. The hospitalized group was kept on bed rest overnight or 24 hours. The discharge group was kept on best rest for 2 hours or mobilized immediately after surgery. The average length of admission for the hospitalized group was 2.4 ± 4.0 days. No patients in either group required readmission or revision surgery for CSF leak. **Conclusions:** Patients with CSF leak post minimally invasive tubular microdiscectomy can be safely discharged home the same day provided that duraplasty or primary repair was performed intraoperatively.

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Comparative analysis of spinal cord-derived and induced pluripotent-derived neural stem & progenitor cells for SCI therapy

RV Sandarage (Ottawa) A Galuta (Ottawa) E Tsai (Ottawa)*

doi: 10.1017/cjn.2024.245

Background: Induced pluripotent stem cells (iPSCs) have revolutionized spinal cord injury (SCI) treatment by generating neural stem/progenitor cells (NSPCs). However, understanding how iPSC-derived NSPCs compare to authentic spinal cord NSPCs remains unclear. This study thoroughly characterizes