Endoscopic Transseptal Transsphenoidal Surgery for Pituitary Tumors: a duble-center preliminary experience

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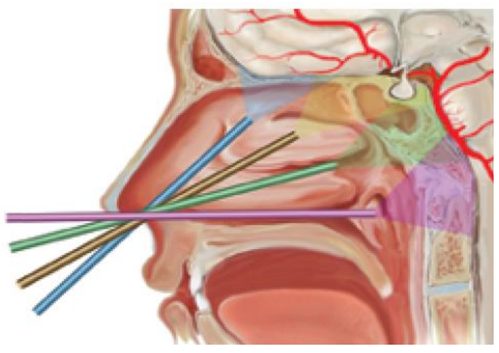
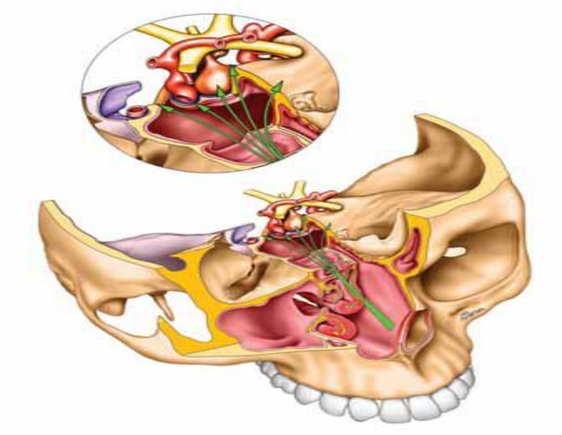
Introduction

Endoscopic transsphenoidal pituitary surgery is a diffuse and well established surgical technique: over the years, the transseptal approach via a nasal mucosal incision has also gained popularity. Here we describe our preliminary experience with an entirely endoscopic transseptal transsphenoidal approach via an incision in the nasal mucosa for sellar tumour resection.





Methods and Materials

A total of 35 patients, with a midline prevalent, even huge, sellar tumor, who underwent endoscopic transsphenoidal transpetal pituitary surgery from January 2023 to May 2024 were reviewed for evaluation of the safety and efficacy of this approach. The surgical corridor is along the entire length of the nasal septum and an endoscope was used since the initial phases of the procedure.

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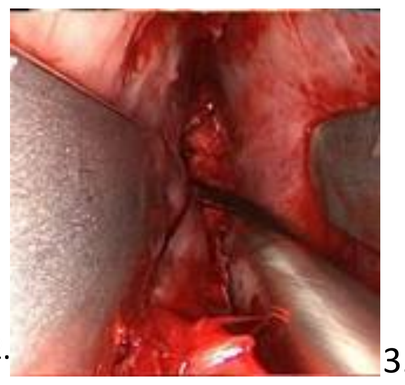
2. 
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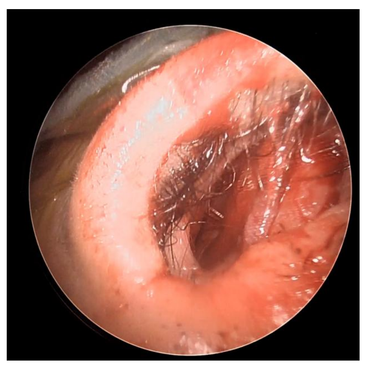
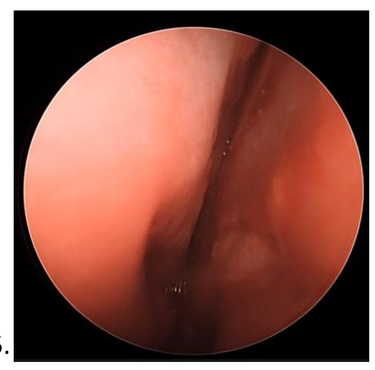
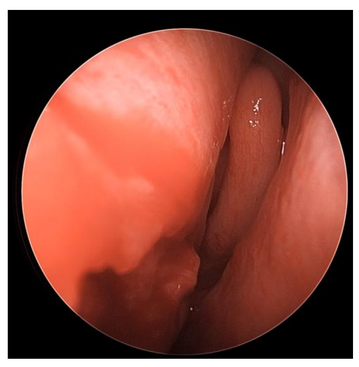
4. 
5. 
6. 

1. The incision of the left nasal cavity
2. The nasal speculum used to shape trans-septal corridor and then removed
3. Remove of pituitary tumor
4. 5. 6. : Endoscopic final intraoperative view

Results

At follow-up, no CSF leaks and no nasal mucosa scarring related to the approach were registered. A low rate of nasal complications occured: 1 septal perforation and 1 mucosal dehiscence. The low-rate of postoperative nasal morbidity was also confirmed by the single case of post-procedural synechia; although the occurrence of a longer operating time in the first cases, globally the transeptal approach did not result in a time-consuming technique and a better cosmetic result was noticed at follow-up.

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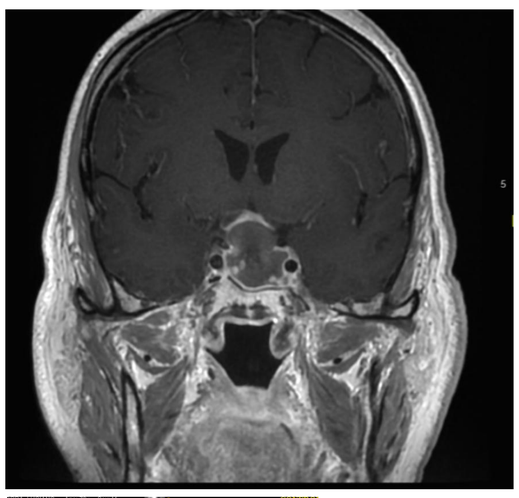

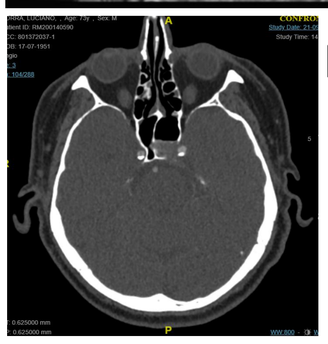

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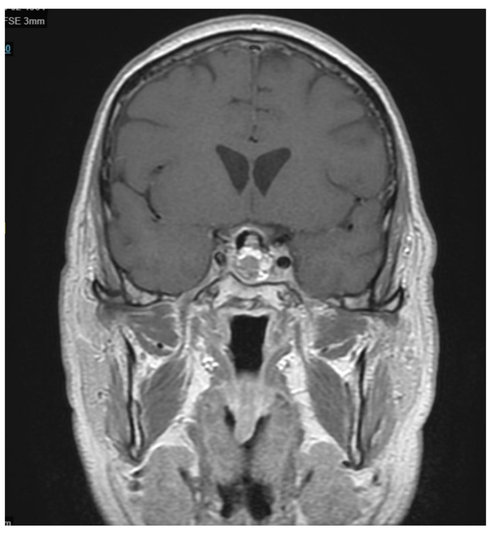

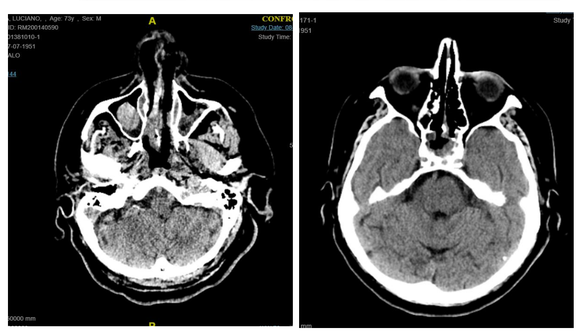

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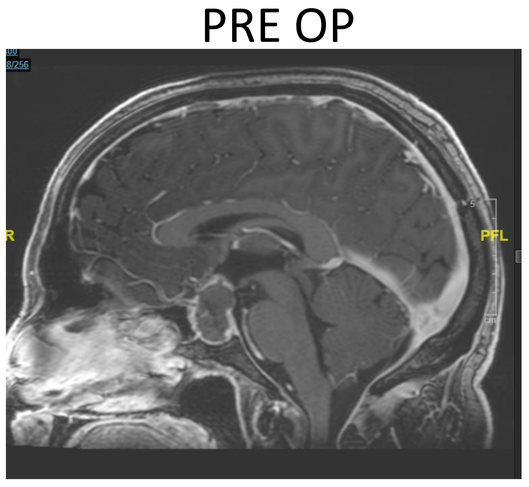

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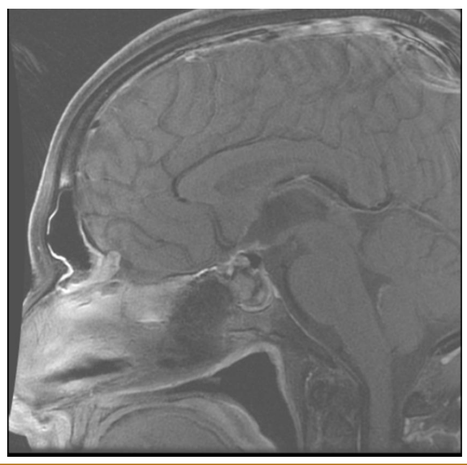

Conclusion

This study confirms, in our experience, the excellent risk-benefit ratio supporting the use of trans-sphenoidal endoscopic transseptal approach in selected cases, of even huge macroadenomas. This working corridor for pituitary surgery was found to be easy for an experienced multidisciplinary team providing good maneuverability and effective therapeutic approach.

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