

# Endoscopic Endonasal Transsphenoidal Pituitary Surgery Under iMRI

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#### Introduction

The two most recent significant advances in pituitary surgery have been the endonasal endoscopic approach and intraoperative magnetic resonance imaging.

### Methods

fifteen patients with pituitary lesion have been operated using endonasal endoscopic approach guided by intraoperative MRI (iMRI) in our center. Six patients had nonfunctioning pituitary adenoma, 3 with acromegaly, 3 had prolactinoma, 2 craniopharyngioma and with patient had Cushing's disease. Preoperative and IMRI images were obtained in all cases.

## Results

: In 5 patients iMRI demonstrated the presence of residual tumor which was resected endoscopically before the completion of surgery helping to achieve a total or near-total excision of the lesion. In two other cases, potential residual tumor was examined endoscopically and found to be normal postoperative change. Total or neartotal excision was achieved in 14 patients (94%) and in only one patient subtotal excision was done. Three patients had CSF rhinorhea postoperatively which was managed conservatively by nasal packing and lumbar drain. No major intraoperative complications were encountered in our series.

### Conclusions

Combining IMRI with endoscopic transsphenoidal surgery for pituitary lesion is feasible and increase the safety of the procedure. Each technology provides complementary information, which can assist the surgeon in safely maximizing the extent of tumor resection.

### Learning Objectives

Is to discuss the impacts of combining the 2 techniques in pituitary surgery especially the extent of tumor resection and the complications incidence.

