# Endoscopic Endonasal Transsphenoidal Approach to Pituitary Adenomas: the Experience of the Toronto Western Hospital

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## Introduction

Endoscopic transsphenoidal approaches are increasingly utilized for skull base lesions, however, there are few reports of large series on this topic. Our objective is to report the results of a consecutive series of patients who exclusively underwent an endoscopic endonasal approach for pituitary adenoma resection at our institution over a 7-year period.

## Methods

We reviewed 433 consecutive patients from 2008 to 2014 with pituitary adenomas who underwent endoscopic endonasal transsphenoidal resection of their lesions by two surgeons at a single institution.

## Conclusions

The endoscopic endonasal transsphenoidal approach for pituitary adenoma resection is safe and effective as shown in our large series with low complication rates. This study adds to the growing body of literature which will help to establish minimally accepted complication rates with this favorable approach.

## Results

The most common subtypes were gonadotroph (45.8%) and ACTH-secreting (14.4%) adenomas. FGFR and p27 were expressed in the majority (88.5%) of tumors. There were 213 males (49.2%). The average age of the cohort was 50.6 (range 13-86). Patients most frequently presented with endocrinopathy (36.4%) and visual deficits (35.2%). Gross-total resection was achieved in 78% of cases. Endocrinopathy improved in 87.9% of the affected patients. Complications included CSF leak (12.8%) and death (0.2%).

## Learning Objectives

By the conclusion of this session, participants should be able to:

1) Describe the importance of the endoscopic endonasal transsphenoidal approach for pituitary adenomas.

2) Discuss, in small groups, the favorable rate of tumor resection to complications using this approach.

3) Identify the importance of this approach in pituitary surgery and what can be considered as important complications or risk factors for future complication avoidance when considering this approach in pituitary adenoma surgery.

## References

1. Juraschka K, Khan OH, Godoy BL, Monsalves E, Kilian A, Krischek B, Ghare A, Vescan A, Gentili F, Zadeh G (2014) Endoscopic endonasal transsphenoidal approach to large and giant pituitary adenomas: institutional experience and predictors of extent of resection. J Neurosurg 121(1):75–83