**INTRODUCTION**

Pituitary adenomas comprise 90% of all sellar lesions and 10% of all primary neurologic neoplasms. The reported prevalence of pituitary adenomas in the literature varies greatly, between 19/100.000 to 1/1.000.1

Clinical presentation depends on the size and functional status of the tumor. Functioning adenomas (>50%) - ACTH, GH, TSH, PRL - present with symptoms of neuroendocrine hypersecretion. Nonfunctioning adenomas (>50%) - including LH, FSH - can cause mass effects, due to compression of adjacent structures.1

Surgical resection is indicated for functioning adenomas not adequately controlled medically, and for tumors causing mass effect, regardless of secretory status.1

The surgical approaches to the pituitary gland are intracranial, microscopic endonasal/sublabial/transcolumellar, and endoscopic endonasal transsphenoidal.2,3 The last has been increasingly used and is now the method of choice in 95% of cases.2 Being minimally invasive, it has several advantages over the traditional approaches: a more expansive field of view; better preservation of nasal anatomy and physiology; lower morbidity; same safety.2,4

**OBJECTIVES:** To report the results of a consecutive series of patients who underwent an endoscopic endonasal transsphenoidal approach (EETA) for resection of a pituitary adenoma. Analyze results and complications.

**METHODS**

Retrospective observational study of cases who underwent EETA for a pituitary adenoma, at our center, between 3 consecutive years (January 2010 to December 2013).

EETA was performed by an ENT/head and neck surgeon and a neurosurgeon, using a four-hand and two-nostrils technique, with neuronavigation:

- Bilateral sphenoidotomy, posterior septectomy, removal of sphenoidal sinus septum
- Opening of the sella, fracture of the thin bone floor, exposure and opening of the dura
- Enucleation of the adenoma
- Closure of the sella with dural substitute and fibrin glue

Total of pituitary adenomas resected by EETA: 19

**RESULTS**

Mean age: 50 years (13-71 years)

**Most frequent symptoms:**
- Decreased visual acuity/visual field defects (63.2%)
- Headache (26.3%)

**Macroadenoma (>1cm):** 84.2%

Only 16.7% had a tumor confined to the sella. The majority (66.7%) had a suprasellar extension.

**Non-functioning adenoma** was the most frequent (52.6%) (Chart 1).

![Chart 1. Type of adenoma.](chart)

**Complications:** see Table 1.

**Average follow-up time:** 10.5 months (1.5-28 months).

**Gross total resection rate** (non-functioning adenomas): 70% (Table 2).

**Global remission rate** (functioning adenomas): 75% (Table 3).

Significant residual tumor: 1 case (5.3%) → Cranotomy

There were no recurrences on this follow-up period.

**Patients with visual symptoms:**
- 91.7% improved
- No patient without preexisting vision loss suffered visual decrement

**DISCUSSION**

EETA has several known advantages over the other classic approaches for pituitary adenomas (intracranial, endonasal/sublabial/transcolumellar microscopic):
- Panoramic view (sellar, para and suprasellar regions)
- More complete tumor resection (better visualization of the periphery of surgical dissection)1
- Lower incidence of residual tumor (for lesions extending beyond the sella)5,6
- Better preservation of sinonasal anatomy/physiology2
- Improvement in the quality of the postoperative course1
- Similar major complication rates1
- Similar visual improvement6

Comparing our study with other microscopic2,4,8 and endoscopic1,6,7 series, we had similar results:

**REFERENCE**


CONCLUSIONS

EETA is more advantageous than the other classic approaches for pituitary adenoma, once it provides favorable results with less morbidity.

Being minimally invasive, it is now the gold standard of transnasal pituitary surgery.

Our outcomes, including remission and complication rates, are comparable with those reported in previous series of endoscopic and microscopic approaches.

REFERENCES