

# Microscopic Transsphenoidal Surgery for Pituitary Adenomas in Children and Adolescents

*Masoud Shirvani, Alireza Hajimirzabeigi, Rozita Jafari, Morteza Khatami, Alireza Razzaghi, Shahrokh Yousefzadeh-Chabok*

## Abstract

**Background & Aim:** We described the presentation, management and subsequent treatment outcomes of children and adolescents diagnosed with a pituitary adenoma in a joint neuroendocrine setting followed up by a single service as well as assessing long-term outcomes in terms of endocrine status and neurology symptoms.

**Methods & Materials/Patients:** A total of 21 participants with histologically verified pituitary adenoma between January 2011 and June 2014 were studied. Patients' data from clinical, radiological and pathological records were analyzed using SPSS (Version 16).

**Results:** All these children and adolescents with pituitary adenomas were managed with microscopic transsphenoidal surgery. The most common symptom was Cushing (47.6%, n=10). The functional type (76.2%, n=16) was more than the non-functional. The post-operative control MRI of most of them was clear (90.5%, n=19). The lab control of most of them was normal (76.2%, n=16). Apoplexy was seen in 5 patients (33.8%). Gross-total resection (GTR; 100% tumor removal as judged by early post-operative imaging) was achieved in 19 cases. Only one of these patients showed evidence of radiologic recurrence.

**Conclusion:** In our study, all patients underwent microscopic transsphenoidal surgery due to limitation of endoscopic approach in pediatric and avoided wide anatomical deficit. Doing a comparative study between these two approaches will bring about promising results.

**Keywords:** Pediatric Pituitary Adenoma; Apoplexy; Transsphenoidal Approach; Functional Pituitary Adenomas; Nonfunctional Pituitary Adenomas