

**EP1291**

**JOINT3877**

**Craniopharyngioma in adolescence: from diagnosis to ongoing care**

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**Introduction**

Craniopharyngiomas are rare, benign tumors that arise near the pituitary gland, predominantly affecting children and adolescents. Although benign, these tumors can lead to significant morbidity due to their proximity to critical structures like the hypothalamus and pituitary gland. Early diagnosis and appropriate treatment are essential, particularly when hypothalamic involvement occurs, as it can complicate management and influence long-term endocrine function.

**Case Description**

A 15-year-old female presented with a history of severe, recurrent headaches and syncope. Initial blood and biochemical tests were within normal limits. Endocrine testing revealed normal thyroid function, undetectable LH and subnormal FSH levels, Tanner stage 2 sexual development and decreased height velocity (SDS -1.9 in 2025 vs. SDS -1.3 in 2023). Magnetic resonance imaging (MRI) revealed hydrocephalus and a mass located in the chiasmatic region, suggesting a craniopharyngioma. The patient underwent surgical resection of the mass, and histological examination of the resected tissue confirmed the diagnosis of craniopharyngioma. Postoperatively, the patient developed polyuria, which raised concerns for arginine vasopressin deficiency, thus desmopressin was initiated. Electrolyte disturbances (including sodium and potassium shifts) and low urine specific gravity were observed as well. Given the persistent polyuria (20 L per day), the dose of desmopressin was increased, and within 2-3 days the patient was improved (diuresis 3L per day). Her laboratory results have since normalized. The patient is under ongoing follow-up care by both an endocrinologist and an oncologist for continued monitoring of her recovery and management of potential long-term endocrine effects, including the evaluation of sexual development as part of her follow-up care.

**Conclusions**

Craniopharyngiomas should be considered in the differential diagnosis of adolescents with unexplained neurological symptoms and growth delay. While the patient's craniopharyngioma was managed with initial success, the case underscores the necessity of lifelong multidisciplinary follow-up to address hormonal deficiencies, metabolic complications, and psychosocial challenges. It is important to find the balance between tumor control and preserving quality of life in adolescents with this condition.

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**JOINT909**

**Non-surgical management of patients with pituitary macroadenomas: case report**

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**Introduction**

Particular clinical difficulties are presented by patients with mixed hyperproduction, as well as situations with secondary hyperprolactinemia due to compression of the pituitary stalk. Thus, the aim was to study the results of using of dopamine receptor agonists in patients with macroadenomas and hyperprolactinemia.

**Material and Methods**

An observational study was performed on clinical cases of three patients referred for management and treatment at the Republican Endocrinology Centre. The observation period was from the beginning of 2022 to the present.

**Results**

Patient 1. A 38-year-old man consulted a doctor due to a constant, terrible headache. During the interview, he noted a change in appearance over the past 4 years. The headache has increased worse since March 2022, nasal congestion appeared. In the sellar region, a tumor with uneven clear contours with overall dimensions of 67\*53\*85mm, a heterogeneous structure with the presence of calcifications and small cystic components, measuring up to 7 mm, is determined.

Serum tests: TSH 1,27 mIU/nL, Free T4 14,21pmol/l, Prolactin 10000mIU/l, Cortisol 214.5nmol/l, IGF-1: 956.6 ng/ml, HbA1c - 6,24%. *Ophthalmologist's report*: long-standing papilledema; OD - absolute scotoma in the posterior pole next to the optic disc, OS - widening of the blind spot. In a year treatment prolactin 369.7mIU/l, GH 0.556ng/ml, IGF-1 251.7, then prolactin 282mIU/L. Dynamics Pt MRI: 67\*53\*85mm (May2022) vs. 35\*18\*40mm (October2022) vs. 27\*15\*25 mm (March2023). Patient2. A 23-year-old man with any symptoms and changes in health. In February 2021 he consulted a doctor with the results of a hormonal analysis: TSH 1,98 mIU/nL, fT4: 15,3 pmol/l, prolactin: 6 395mkIU/l, MonoProlactin: 5650mIU/l87%, FSH 33,43 mIU/l, total testosterone - 1,97pmol/l, cortisol: 419nmol/l, HbA1C 5.3%. PT MRI: a pituitary adenoma was detected in the left half measuring 7.5x10x9.5 mm without displacement of the pituitary stalk. Cabergoline 0.5mg twice a week was prescribed. Patient3. A 38-year-old woman consulted a doctor about dizziness and lack of menstrual cycle. Hormonal status parameters: TSH 3,09mIU/nL, FreeT4: 14.72pmol/l, Prolactin: 123100 mkIU/ml, MonoProlactin: 97736mkIU/ml-79.4%, FSH 5.54 mIU/l, Estradiol: 57.71pmol/l, Cortisol: 389.8nmol/l, IGF-1: 135.5ng/ml. PTMRI: a pituitary adenoma 22x20x19mm with clear contours of a solid structure, suprasellar growth, compression of the chiasm. Normalization of prolactin occurred after several months of treatment, but to resume the menstrual cycle it was necessary to increase the dose of cabergoline.

**Conclusion**

The use of cabergoline is an effective and safe treatment for pituitary macroadenomas in the first step.

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**Reproductive and Developmental Endocrinology**

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**JOINT836**

**The relationship between reproductive hormones, testis size, mating strategy, and spermatogenesis efficiency across primates**

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**Background**

In humans, it is well-described that spermatogenesis is tightly regulated by reproductive hormones. Spermatogenesis is also an evolutionarily conserved process, which ultimately results in the production of spermatozoa. Common across all mammals are processes that maintain a stem cell pool, a proliferation phase, meiosis and a final differentiation process. Despite being a conserved process, spermatogenesis also undergoes rapid evolutionary changes driven by selective pressures favouring male reproductive success. Primates represent an excellent population to investigate spermatogenesis since many species are evolutionary close but also differ considerably regarding testis size and mating strategies. Comparison of the spermatogenic efficiency across primates can provide valuable insights into how evolution has influenced the complex interplay between reproductive hormones and testicular function and potentially provide insight into why human male fertility has decreased.

**Methods**

Hormones were measured in serum samples from nine primate individuals representing six different species using ELISA or LC-MS/MS. Histological evaluations of testicular tissue were performed by immunohistochemistry using antibodies against melanoma-associated antigen 4 (MAGE-A4) to stain spermatogonia and nuclear transition protein 1 (TNPI) to stain elongated spermatids. A total of thirteen individuals representing eight species. Germ cells positive for the two antibody markers were quantified using the Qupath software, and the ratio of TNPI-positive spermatids and MAGE-A4-positive spermatogonia was calculated.

**Results**

Whereas the percentage of MAGE-A4-positive spermatogonia was similar between all individuals, there were remarkable differences in the percentage of TNPI-positive spermatids. Species that have a monogamous mating strategy had lower TNPI/MAGE ratios, indicating a lower spermatogenic efficiency and species with a harem mating strategy showed intermediate ratios, whereas species

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