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NON-SURGICAL MANAGEMENT OF PATIENTS WITH PITUITARY MACROADENOMAS: CASE REPORT

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Introduction. Prolactinomas, which are most commonly benign prolactinsecreting adenomas derived from lactotrophs, account for 50% of all pituitary adenomas in both women and men. Microprolactinomas (<10 mm in maximal diameter) are the most frequent type of prolactinoma, but the ratio between macro- and microprolactinomas is approximately 1:8 in women and 4:1 in men. Particular clinical difficulties are presented by patients with mixed hyperproduction (more likely prolactin and growth hormone), 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 (a woman and 2 men) referred for management and treatment at the Republican Endocrinology Centre. The observation period was from the beginning of 2022 to the present. All patients are currently continuing treatment.

Results and their discussion. Patient 1. A 38-year-old man consulted a doctor due to a constant, terrible headache. An MRI of the brain was done at his place of residence, and with the results he was sent to an endocrinologist. During the interview, he noted a change in appearance over the past 4 years (he explained the enlargement of his arms and legs by their swelling). The headache has increased worse since March 2022, nasal congestion appeared (they assumed sinusitis), and therefore a CT scan was performed. He noticed visual impairment for more than a year. *Initial data.* Pituitary MRI (May 30, 2022) In the sellar region, a tumor with uneven clear contours with overall dimensions of 67*53*85 mm, a heterogeneous structure with the presence of calcifications and small cystic components, measuring up to 7 mm, is determined. More likely macroadenoma, less likely meningioma. MRI signs of internal triventricular occlusive hydrocephalus. Exophthalmos. MRA picture of hypoplasia of the left VA. Serum tests: TSH 1,27 mIU/nL, Free T4 14,21 pmol/L, Prolactin 10000 mIU/L, Cortisol 214.5 nmol/L, IGF-1: 956.6 (R 101-231) ng/mL, HbA1 – 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 369.7 mIU/L, GH 0.556 ng/mL (R 0.03-2.47), IGF-1 251.7 (R 101-231), then prolactin 282 mIU/L. Dynamics Pt MRI: 67*53*85 mm (May 2022) vs. 35*18*40 mm (October 2022) vs. 27*15*25 mm (March 2023). Patient 2. 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: 6 395 mkIU/L, MonoProlactin: 5650 mIU/L 87%, FSH 33,43 mIU/L, total testosterone – 1,97 pmol/L, cortisol: 419 nmol/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 0.5 mg twice a week was prescribed. Hormonal tests returned to normal after 3 months of treatment, MRI shows a positive trend with a decrease in the vertical size of the tumor and no compression of the chiasm. Patient 3. A 38-year-old woman consulted a doctor about dizziness and lack of menstrual cycle. Hormonal status parameters: TSH 3,09 mIU/nL, Free T4: 14.72 pmol/L, Prolactin: 123 100 mkIU/mL, MonoProlactin: 97 736 mkIU/mL – 79.4 %, FSH 5.54 mIU/L, Estradiol: 57.71 pmol/L, Cortisol: 389.8 nmol/L, IGF-1: 135.5 ng/mL. PT MRI: a pituitary adenoma 22x20x19 mm with clear contours of a solid structure, suprasellar growth, compression of the chiasm. Normalization of prolactin occurred after several months of treatment with cabergoline, but to resume the menstrual cycle it was necessary to increase the dose of cabergoline.

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