Editorial

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The X-ray and neuroendocrine characteristic of macro and giant non-functional pituitary adenomas

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Introduction

According to Zakir JC, et al.[1] Although some pituitary adenomas may have aggressive behavior, the overwhelming majority of their benign. There are still disputes about predicting factors regarding the biological behavior of these specific tumors.[1]

Juliana Drummond, Federico Roncaroli, Ashley B Grossman noted that silent tumors seem to be more aggressive than their secreting counterparts, with a greater recurrence rate.[2]

As noted Gruppetta M, Mercieca C, Vassallo J, the prevalence for the macroenen was 32.8 / 100,000. Women had a lower proportion to the macroenen than in men (29.5 against 75.0%; p <0.001), and the macroenomans had a tendency to represent at a later age compared to microenomas (48 against 34.5; p <0.001). Giant pituitary adenoma (more than 40 mm) accounted for 4-8% of the whole cohort and SOE was within 0 - 18/100 000 / year.[3,4]

Han S1, Gao W1, Jing Z emphasized that the giant pituitary adenomes (diameter more than 4 cm) are still a problem and there is no consent for the optimal surgical strategy.[5] The surgical and outcomes of 62 patients with gigantic nuts were analyzed. In the subsequent period of 46.9 months, 49 patients (79%) showed an improvement in violations of view, the recurrence of growth was at 8Pacifiers (12.9%).

Landeiro JA., et al.[6] was no less relevant. In 2015, they reported their surgical treatment of 35 patients with gigantic-cardic hypophized adenomas. They proved the role of Antigen KI-67 in the prediction of relapse.

Nishioka H., et al.[7] presented a surgical series of giant nuts to shed light on limiting efficient and safe resection of a giant pituitary tumor. An transphenoidal approach was used in the treatment of 109 patients. The authors concluded that independently of the surgical approach, large intracranial stretching, improper configuration and invasion - innate factors that limit effective resection.

According to Yatavelli R.K., et al.[8] the following characteristic of the sizes of the tumor is proposed: So they can be attributed as microadenoma if it is less than 10 mm, and macroadenoma (more than 10 mm) or a giant pituitary adenoma (more than 4 cm).

As noted Yano S1, Hide T2, Shinojima N2,[9] after analyzing operations, 34 patients concluded that endoscopic endon-axis surgery of the base of the skull allows fewer invasive and more secure removal of various types of giant hypophized adenomes.

As shown by Yosef L., et al.,[10] "Giant" tumors are associated with the worst forecast. The authors believe that the proper, international adopted definition of what is "big", "gigantic," or even "monstrous" for the size of education should be established.

Postoperative mortality in the giant pituitary adenomas group ranges from 5 to 13% and the decline in the latter refers mainly, Tumors of small sizes. In many patients, severe impairment of visual and endocrine functions persist after surgery; The disorder of the reproductive function is usually irreversible. The number of relapses remains high - up to 17.3-26.4%.

In the absence of postoperative radiation therapy, the recurrence frequency can reach 55.5% . First of all, this refers to the giant adenoma of the pituitary gland, the amount of which is about 10% of all the most numerically diagnosed ag. It is among the sick of this group that there is a high postoperative mortality, a significantly number of postoperative complications and adverse outcomes, as well as tumor recurrences. And it is precisely this group of the pituitary adena that is often characterized by a multi-mold and invasive-infiltrative growth, and the tactics of surgical treatment of giant aging is still not fully developed.

There are no information about the features of the manifest of giant pituitary adenomas. All of the above served as a reason for this study.

The aim of investigation - to study the X-ray and neuroendocrine characteristic of macro and giant non-functional pituitary adenomas.

The material and methods: We studied data from the neuroendocrinology department of RSSPMC Endocrinology of PHM named by akad. Yo.Kh. Turakulov. There were 87 patients with macro and giant pituitary adenomas have hospitalized for last 3 years (period 2019-2021 years) of which men - 46, women -41). Average age: men amounted to 37.12 years, women - 38, 15 years. The duration of the disease ranged from 2 months to 25 years.

In our study, we relied on the classification of Kurokawa Y., (1998), which considers tumors to be more than 30 mm and 40 mm, respectively, as gigantic.

31 of 87 patients were subjected to (35,6%) TPAs (transnasal pituitary adenomectomy) in neurosurgery department of the RSSPMC Endocrinology of PHM named by akad. Yo.Kh. Turakulov (PhD. Akbutaev A.M., Prof. Michael Powell from the UK, London). Repeated operations on the pituitary gland were performed in 1 patient (3.2%).

Research methods included: 1) general clinical (examination of endocrine, neurological status), 2) instrumental (perimetry for all colors, eyes fundus, 3) ECG, CT / MRI of the Turkish saddle, 4) ultrasound investigation of internal and genital organs, etc.), 5) hormonal blood tests (STH, IGF-1, LH, FSH, TSH, ACTH, prolactin, testosterone, estradiol, progesterone, cortisol levels, etc. In addition, the postoperative material was subjected to histological diagnosis in RSSPMC Endocrinology Center MPH RUz named by academic Yo. Kh.Turakulov (histology office).

Radiological research methods included computer and magnetic resonance tomography of the Turkish saddle. Studies were carried out before treatment and with multiplicity after 3, 6.12, 18, 24, 36 months after surgery or radiation therapy of the pituitary gland. All these studies were performed to assess the presence of complications of pituitary tumors. MRI and CT pituitary gland and adrenal glands carried out in the Jacksoft clinic (Tashkent).

Statistical calculations were performed in the Microsoft Windows software environment using the Microsoft Excel-2007 and Statistical version 6.0, 2003 software packages. The data obtained are reflected in the dissertation in the form M ± m, where M is the average value of the variation series, m is the standard error of the average value. The significance of differences between independent samples was determined by the Mann-Whitney and Student methods.

Results

Depending on the size of the adenoma of the pituitary, detected on CT / MRI, the patients were distributed into two groups: 1 group of patients - macroadenomas (from 20 to 30 mm) - 47 (44.8%), and 2 group of patients – giant pituitary adenomas - (more 30 mm) - 40 (55.1%) cases.

For patients with groups with both groups the ophthalmological disorders were characterized by khyazmal syndrome, that is, the loss of the fields of view: bitemporal hemyanopsiya, the initial left- (or right), a third-party homonymous hemianopsiya, full of left (or right), and others.

Among neuroendocrine complications in patients with macro-NFPA were identified: amenorrhea, secondary hypothyroidism, secondary hypocorticism. In patients with giant NFPA, panhypopituitarism was noted with predominant secondary hypocorticism and secondary hypogonadism with bitemporal hemyanopsiya.

We studied the results of hormonal investigations depending on the severity of STH de ficiency (STHD) in patients with NFPA (n = 87). It was revealed that the combined deficit of STH and LH was revealed in 14 (16%) patients with NFPA, a combined deficit of STH, LH, FSH - in 16 (18.3%), a combined deficit of STH, LH, FSH and TSH - at 22 (25.2%), combined deficiency of STH, LH, FSH, TSH and ACTH - in 11 (12.6%), combined deficiency of STH, LH, FSH, TSH, ACTH and non-soldering diabetes - in 7 (8%). Dislipidemia in patients with mild and medium and severe STHD are drawn attention.

Thus, in patients with NFPA, various options for hypopituitarism were found.

Conclusions

According to our research, the most common complaint of the manifest was a bitemporal hemianopsiya (26%), although most patients had a treasure course.

Acknowledgment

None.

Conflicts of interest

None.

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