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"COMPARATIVE ANALYSIS OF QUESTIONNAIRE DATA TO ASSESS GROWTH HORMONE DEFICIENCY IN ADULTS QOL AGHD IN PATIENTS WITH INCIDENTALOMAS AND INACTIVE PITUITARY ADENOMAS"

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Abstract:

Purpose of the study– perform a comparative analysis of data from a questionnaire to assess growth hormone deficiency in adults QoL AGHD in patients with incidentalomas and inactive pituitary adenomas

Material and research methods An analysis was performed on 100 patients with
NAG and IG. Next, the patients were divided into 2 groups: 1 gr. - 50 patients with NAG and 2 gr - 50 patients with IH.

All patients underwent a complex of studies, which included general clinical tests (general blood and urine analysis), biochemical, hormonal (GH, IGF-1, PRL, LH, FSH, TSH and others in the blood serum, ICL method), ultrasound of internal organs and patient questionnaires.

Research results. A direct relationship between low basal values of GH, IGF-1 in blood plasma and the average values of the GHD QoL-AGHDA questionnaire was found in groups 1 and 2, which confirms the use of the GHD QoL-AGHDA questionnaire in patients with GHD of various origins.

Conclusions : Study of quality of life based on the DGR questionnaireQoL-AGHDA for 50 patients in groups 1 and 2 revealed that in all groups the overall average score was higher than normal, namely in 1 group – 16 points, and in the second group 18 points (above 11 points), which also confirms the presence of cognitive decline functions in these patients.

Keywords: QoL AGHD, incidentalomas and inactive pituitary adenomas

RELEVANCE OF THE RESEARCH TOPIC. Incidentalomas (incident-accident) are tumor formations discovered in any organ by chance during a more detailed examination of the patient. Pituitary incidentalomas can be either NAG or hormonally active adenomas, for example, prolactinomas.

The most common reasons for performing CT/MRI of the brain for incidentalomas (ICD 10: D35.2) are headache, various neurological symptoms, and traumatic brain injuries. Based on the definition, the diagnostic search is not due to specific disorders, such as signs of hormonal hypersecretion, as well as narrowing of visual fields and hypopituitarism of varying severity, which are based on the mass effect of tumor tissue [1-7]. There are contradictions in the definition of incidentaloma in different studies. Some researchers include in it only those formations that meet the radiological criteria for pituitary adenoma, excluding cysts [2, 3], others take into account any lesions in the sella turcica region, for example, craniopharyngiomas are usually divided into microincidentalomas (less than 1 cm) based on the size of incidentalomas (less than 1 cm). diameter and macroincidentalomas (more than 1 cm in diameter). Incidentalomas may have features of a solid, cystic or hemorrhagic structure, or a combination of these characteristics [8,9].

Currently, the development of hormonally inactive pituitary adenomas—NAH and other pituitary adenomas—is associated with monoclonal somatic mutations. The influence of hypothalamic hormones and neurotransmitters is assumed to be the factors initiating cellular transformation. NAH is not accompanied by clinical signs caused by overproduction of pituitary tropic hormones. However, they are capable of producing glycoprotein hormones (gonadotropins, the β-subunit of glycoprotein hormones) and other biologically active substances, which are detected during immunohistochemical examination of a removed tumor. The growth pattern of NAG varies from very slow, frozen

at the microadenoma stage, to rapid tumor spread with progression of pituitary insufficiency and neurological symptoms [10].

In the general population, the frequency of inactive pituitary adenomas (PAA) is 50 cases per 1 million population. [A.B. Grossman, 2015] Moreover, today there are patients with pituitary incidentalomas (IP), which are also called the disease of modern technologies with a frequency of 5-17 cases per 1 million. These are individuals with incidentally discovered pituitary formations that do not have certain clinical disorders, but require dynamic monitoring for up to 5 years, since they can be the founders of both hormonally active and inactive formations.

Pituitary incidentalomas are benign or malignant lesions that may arise from the pituitary gland or be of extrapituitary origin. The true pathological categories are not really known, since most of these incidentalomas are not treated surgically. From several surgical groups, it can be concluded that the vast majority are benign pituitary adenomas (90%), while only 10% are of extrapituitary origin.

PURPOSE OF THE STUDY– perform a comparative analysis of data from a questionnaire to assess growth hormone deficiency in adults QoL AGHD in patients with incidentalomas and inactive pituitary adenomas

MATERIAL AND RESEARCH METHODS An analysis was performed on 100 patients with NAG and IG. Next, the patients were divided into 2 groups:

1 gr. - 50 patients with NAG

2 gr - 50 patients with IH.

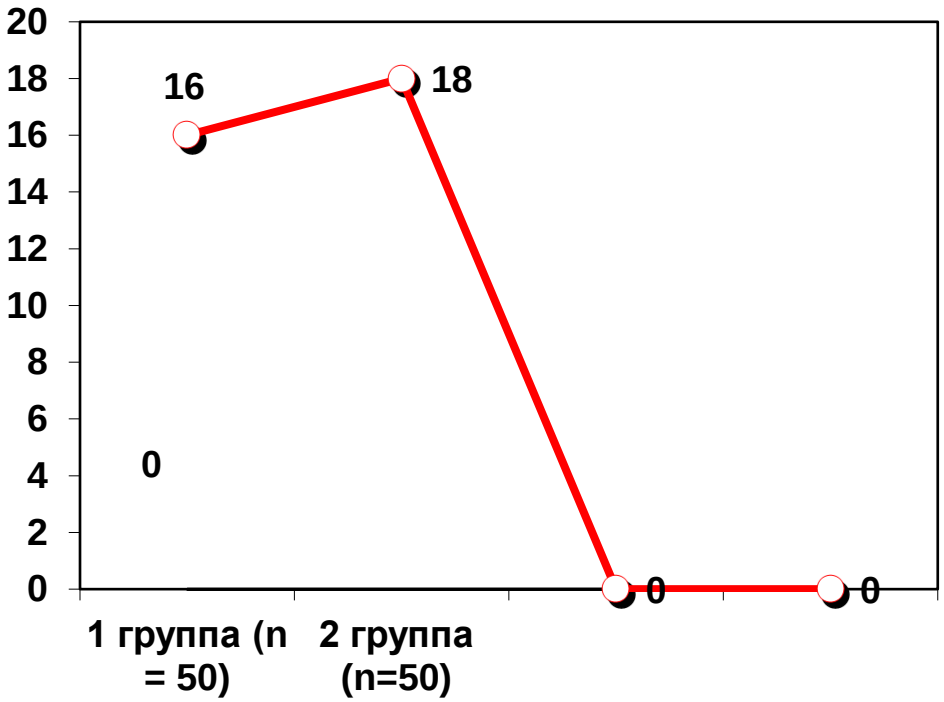
Questionnaire submittedFor the doctor: each answer "YES" or "NO" - 1 point.If the sum of the "YES" answers received is less than 11 points, then this is the norm..If the sum of the "YES" answers received exceeds 11 points, then this indicates a possible DGR.

All patients underwent a complex of studies, which included general clinical tests (general blood and urine analysis), biochemical, hormonal (GH, IGF-1, PRL, LH, FSH, TSH and others in the blood serum, ICL method), ultrasound of internal organs and patient questionnaires.

The obtained data were processed using computer programs Microsoft Excel and STATISTICA_6

RESEARCH RESULTS.A study of the quality of life based on the GDR QoL-AGHDA questionnaire for 50 patients in groups 1 and 2 revealed that in all groups the overall average score was higher than normal, namely in 1 group - 16 points, and in the second - 18 points (above 11 points) , which also confirms the presence of a decrease in cognitive functions in these patients (Fig. 1).

It should be noted that in group 1, an increase in scores above 11 was detected in 8 (16%) patients, while in group 2 – in 19 (38%).



Rice. 1. Results of analysis using the GDR questionnaire by group

Table 1 shows the resultsquestioning of patients of 2 groups using the GDR questionnaire in adults and comparison with basal levels of GH, IGF-1 in blood plasma

Table 1. Results of questioning of patients of 2 groups using the GDR questionnaire in adults and comparison with basal levels of GH, IGF-1 in blood plasma

Number of patients in the group	Average point	STG	P1	IGF-1	P2
1 group (n= 50)	16.3±6.52	0.62±0.14	<0.05	114.12±61.5	<0.5
2nd group (n= 50)	17.0±6.8	0.41±0.12	<0.05	81.10±32.6	<0.1

As can be seen from Table 1, a direct relationship between low basal values of GH, IGF-1 in blood plasma and the average values of the GHD QoL-AGHDA questionnaire was found in groups 1 and 2, which confirms the use of the GHD QoL-AGHDA questionnaire in patients with GHD of various origins.

Study of quality of life based on the DGR questionnaireQoL-AGHDA for 50 patients in groups 1 and 2 revealed that in all groups the overall average score was higher than normal, namely in 1 group – 16 points, and in the second group 18 points (above 11 points), which also confirms the presence of cognitive decline functions in these patients.

It should be noted that in 1 gr an increase in scores above 11 was detected in 8 (16%) patients, while in 2 gr – in 19 (38%).

A direct relationship between low basal values of GH, IGF-1 in blood plasma and the average values of the GHD QoL-AGHDA questionnaire was found in groups 1 and 2, which confirms the use of the GHD QoL-AGHDA questionnaire in patients with GHD of various origins.

Thus, based on the studies performed, we can come to the conclusion that NAH and IH have different features of the clinical manifestation of the disease, diagnosis, course and prognosis.

Our studies have shown the role of hormonal and neuroimaging studies in the early diagnosis of NAG and IH.

CONCLUSIONS: Study of quality of life based on the DGR questionnaireQoL-AGHDA for 50 patients in groups 1 and 2 revealed that in all groups the overall average score was higher than normal, namely in 1 group – 16 points, and in the second group 18 points (above 11 points), which also confirms the presence of cognitive decline functions in these patients.

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