

JOINT912**Prevalence, clinical and laboratory features of pheochromocytoma in minsk residents: analysis of data for 2023**

Ekaterina Shepelkevich¹, Yuliya Dydyska¹, Shepelkevich Alla¹ & Elena Yurenya²

¹Belarusian State Medical University, Minsk, Belarus; ²Minsk city endocrinological center, Minsk, Belarus

Introduction

According to official statistics, the prevalence rate of the pheochromocytoma (PHC) at the beginning of 2022 in the Republic of Belarus was 0.74 per 100 thousand population, which may indicate insufficient timely diagnosis of this disease. **The aim was** to assess the prevalence and clinical and laboratory features of PHC in residents of the city of Minsk, referred to confirm this diagnosis at the Minsk City Clinical Endocrinology Center.

Materials and methods

A one-time retrospective study was performed, which included 50 patients, residents of the city of Minsk (12 men and 38 women; 1: 3.2), referred for additional diagnostics of PHC during 2023.

Results and their discussion

In total, data from 59 patients with clinical manifestations of secondary arterial hypertension and/or adrenal formations were analyzed. The average age of patients was 69(56-74) years. Adrenal masses were detected in 78%($n = 39$), arterial hypertension was confirmed in 88%($n = 44$). Comorbid conditions include thyroid pathology (60%, $n = 30$), parathyroid glands (2%, $n = 1$), diabetes mellitus (12%, $n = 6$), psychoemotional disorders (panic attacks in 4%, $n = 2$). The results of laboratory diagnostics showed the level of free metanephrine in blood plasma - 60.83(19.29-103.1) pg/ml, an increase in the indicator is typical for 28%($n = 14$), an increase in the upper limit of the reference by 3 or more times - 4%($n = 2$). The concentration of normetanephrine was 189.45(59.5-275.7) pg/ml, above the reference interval in 48%($n = 24$), an increase by 3 or more times - 4%($n = 2$). Taking into account the clinical, anamnestic and laboratory-instrumental data, a subgroup of patients with confirmed diagnosis of PHC was formed, including 5 people, which is 10%. Average age was 70 (60-71) years, the ratio of men ($n = 3$)

to women ($n = 2$) was 1.5:1, adrenal masses were detected in 60% ($n = 3$), with a native density of more than 10 UH in 40% ($n = 2$), and a size of more than 4 cm in 40% ($n = 2$). A history of surgical treatment of adrenal masses was reported in 20% ($n = 1$). Antihypertensive therapy is received by 60% ($n = 3$), two drugs – 40% ($n = 2$), three drugs, including digoxin – 20% ($n = 1$). The median metanephrine was 135.1 (15.6-299.8)pg/ml, increased in 60% ($n = 3$), more than 3 times – 40% ($n = 2$), normetanephrine - 570.1(417.8-2219)pg/ml, increased in all patients, more than 3 times – 60% ($n = 3$), aldosterone – 132.4(94.21-172.45)pg/ml, renin – 0.15(0.09-0.49) μ IU/ml.

Conclusions

Confirmation of PHC was noted in 10% of patients, which confirms the clinical significance of the study of free plasma metanephrines and substantiates the importance of this study in patients with adrenal tumors and the presence of arterial hypertension.

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