

Cannulated prolactin test for the diagnosis of hyperprolactinemia syndrome

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The aim was to evaluate the results of a cannulated test for prolactin in patients of reproductive age with hyperprolactinemia (HP) and analyze the frequency of specific and nonspecific complaints, the presence of obesity and overweight.

Materials and methods

We examined 120 patients, 93w, 27m; age 31.4 ± 9.0 yrs. After the catheterization of the vein, a venous cannula was installed, blood was taken immediately after the cannulation (P0), then 60 minutes (P1) and 120 minutes (P2). The results of the cannulated prolactin test (CPT) were considered positive - with HP remaining in all three samples (P0, P1, P2), questionable - if HP was retained at P0 and P1, and negative if HP was only at P0. HP was diagnosed in accordance with the recommendations of the Endocrine Society: > 20 ng/ml (424 mU/l) in men and > 25 ng/ml (530 mU/l) in women.

Results

99 patients (87.1% of women and 66.7% of men) had complaints, of them 67 patients (68.8% women and 11.1% men) had specific to HP syndrome (galactorrhea, menstrual disorders, reduced libido, pregnancy-free), 52 patients (39.7% of women and 59.3% of men) had non-specific complaints (breast pain, scrotum pain, weight gain, acne, headache, dizziness, fatigue). Overweight and obesity occurred in 31.8% of patients. Positive CPT was detected in 36.7% of patients. Patients with stress-induced HP (negative CPT) and patients with true HP (positive CPT) had no statistically significant differences in age and frequency of occurrence of specific and non-specific complaints and symptoms for HP. A decrease in serum PRL (P2 vs P0) was found in 113 patients (94.2%), with a median decrease of 158.9 mME/l. Patients with positive CPT had a higher PRL at P0 (888.5 mME/l, $P < 0.001$). Among patients with a negative CPT, i.e. with stress-induced HP, the proportion of overweight and obese was 52.6% vs 22.7% among patients with true HP ($P < 0.001$), and obesity was 21.0% vs 11.3%, $P < 0.05$.

Conclusion

Our results shown that patients with a moderate HP have positive CPT in 36.7% of cases. A negative test, indicating the absence of true HP, is more often recorded in men, as well as in individuals with overweight and obesity. The presence of complaints and symptoms, especially nonspecific ones, does not have a significant impact on the test result. We can assume that CPT is a promising method for excluding physiological (stress-induced) HP in young people of reproductive age with HP.

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