

## Somatotypes of Patients with Prostate Adenoma

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### Research Article

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### Abstract

One of the most common diseases in men in the second period of adulthood, in elderly and old ages is "Benign prostatic hyperplasia (BPH)." Moreover, if at the age of about 40-49 years, it occurs in 11.3% of men, after 80 years it is found in 95.5%. The etiology of prostate adenoma (BPH) exists in the form of hypotheses and it's in many respects controversial. Objective of the research: to establish the most common somatotype of patients with prostatic adenoma (PA) according to the index of Tanner and Rees-Eysenck body index.

**Keywords:** Tanner and Rees-Eysenck body index; Anthropometry; Pyknic Somatotype

**Abbreviations:** BPH: Benign Prostatic Hyperplasia; PA: Prostatic Adenoma.

### Tasks

- To carry out anthropometry.
- To compare the incidence of somatotypes identified by Tanner and Rees-Eysenck indices in the group of patients with PA and healthy men of the same age [1].

### Materials and Methods

We examined 150 patients with morphologically confirmed diagnosis who were operated in the urology departments of Krasnoyarsk hospitals. The patients' age was 61-74 years (mean age 67,  $7 \pm 1,3$ ). Standard anthropometry was made to all of them in 27 parameters [2-4] with the calculation of osteometric indices of Rees-Eysenck [4,5] and Tanner according to the known formulas [2,3,6].

Anthropometric data taken from the healthy men of the same age were used as a comparison group [7]. Statistical data management was made using the Student's test and  $\chi^2$ . Differences were considered significant at  $p < 0.05$ .

### Results

Determination of patient somatotype by Rees-Eysenck index showed that men of pyknic somatotype made up 47,4% (men of the population - 78,6%;  $P < 0,05$ ), normosthenic type -40,6% (13,9%;  $P < 0,05$ ), asthenic type - 12% (7,5%;  $P < 0,05$ ). When comparing the frequency of somatotypes among patients with PA and men of the population there is a significant difference. Patients with BPH are presented in the majority by pyknic and normosthenic types, while among men of the population the pyknic somatotype considerably prevails. Data of these comparisons are shown on Figure 1.

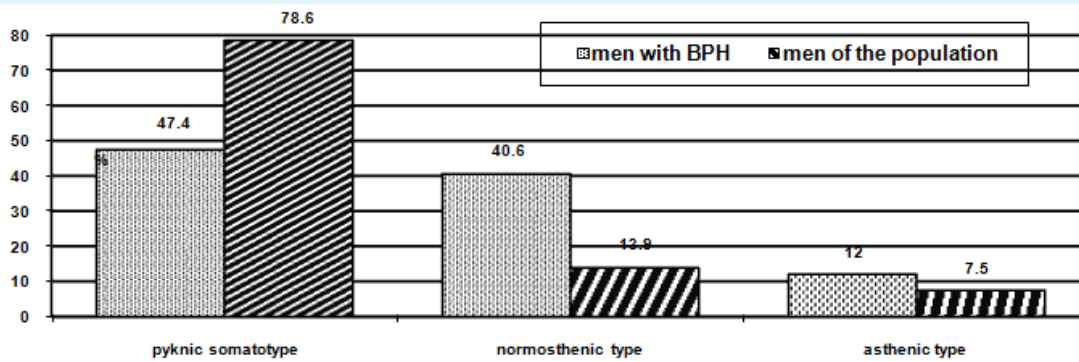


Figure 1: Comparison of the incidence of somatotypes by Rees-Eysenck index among patients with BPH and male population (% of the total number).

While identifying patient somatotypes by the index of Tanner it was found out that gynaecomorphic men amount 80,8% (men of the population - 17,2%;  $P < 0,05$ ), mesomorphic ones - 17,6% (66,6%;  $P < 0,05$ ) and andromorphic group made up only 1,6% (16,2%;  $P < 0,05$ ).

In comparison with the population values there are striking differences. Gynaecomorphic men are in the majority among the patients and as for the andromorphic men - they are almost absent (Figure 2).

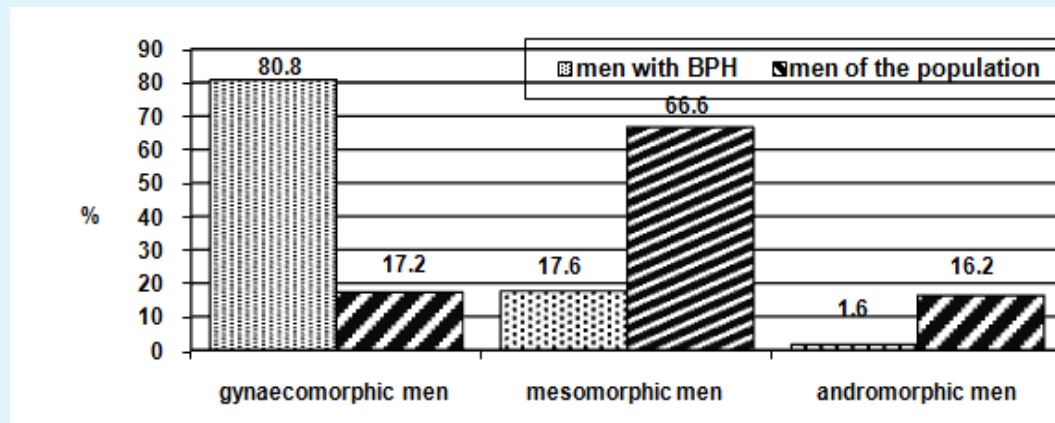


Figure 2: Comparison of the incidence of somatotypes by Tanner index among patients with BPH and male population (% of the total number).

## Conclusion

a. Among patients with BPH gynaecomorphic and mesomorphic groups are found predominantly. But gynaecomorphic somatotype is obviously dominating. Consequently, the balance of estrogen / androgen is of direct relevance to the etiology of the disease. We will dare to assume that PA is inherited in the same way, as expression of the gynaecomorphic features of the male constitution.

b. We state that male somatotype is directly related to the development of benign prostatic hyperplasia.

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