THE PARTIAL ANDROGEN DEFICIENCY AMONG AGING MEN AND DEVELOPMENT OF
METABOLIC SYNDROME
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Objectives: In order to compensate for the inadequacy of testosterone production in men after 40 years
of age, a whole complex of compensatory-adaptive reactions is formed in the body at the endocrinal,
paracrine, and autocrine levels (Pechersky et al., 2003). Materials and methods: In this study 18
patients with partial androgen deficiency were given the androgen-replacement therapy (testosterone
undecanoate) once each morning. Results: A month after the beginning of androgen-replacement
therapy the patients showed a reduction in their levels of STH, ACTH, cortisol, insulin, total cholesterol,
glucose, and PTH, bFGF, IL-1α, TNFα as compared with their original values before the study began.
The patients also showed a change in their levels of peroxide oxidation of lipids (basis tiobarbituate
acid-active products and stimulated tiobarbituate acid-active products), as well as increased activity of
elastase (of neutrophils and in the blood serum). Discussion: The development of insulin resistance and
osteoporosis among men of older age groups, which is accompanied by an increase in the levels of
insulin, STH, ACTH, cortisol, glucose, PTH, and bFGF, as well by an increase in the share of fatty
tissue, is due to a significant level of testicular inadequacy. The increase in proliferate activity among
men with PADAM stimulates a response of anti-tumor cell immunity (increased levels of IL-1α, TNFα
and values of peroxide oxidization). An inverse development of the given pathological processes is not
possible without correction of partial age-related androgen deficiency.