The Aspects of Development of Prostate Cancer

Introduction and Objectives: After transformation from androgen-independent cells, the androgen-dependent pool of cells requires the presence of a physiologically necessary level of testosterone for further development. A decrease in the testosterone level is compensated both by an increase in aromatase and 5α-reductase activity, and by an additional increase in production by cells of peptide growth factors: bFGF and others (Pechersky A.V. et al., 2003). Natural immunity reactions are initiated by a series of chemical structures (glycoproteins, containing mannose, and others), that appear among old, proliferate and malignant cells (A.A. Yarilin, 1999). Highly-active forms of oxygen and nitrogen, as well as other factors determine the cytolytic (including antineoplastic) action of monocytes, macrophages, neutrophils and cytotoxic T-cells to a significant degree (Yarilin A.A., 1999; Roitt I. et al., 2000). The use of antioxidants consistently decreases the effectiveness of the immune system response under an increase in mitotic activity of cells.
Materials and Methods: When using an androgen-replacement therapy, one can observe a decrease of aromatase and 5α-reductase activity, and by an additional decrease in production by cells of peptide growth factors: bFGF and others (Pechersky A.V. et al., 2002, 2006). When there is an obvious need to conduct androgen-replacement therapy, the dose of the preparation shouldn't exceed the quantity of the hormone that decreases with age. The danger of prescribing surplus doses of testosterone preparations was shown in research done in the last century on mechanisms of development of prostate cancer. As a hypothesis, one can suppose that prescribing small doses of testosterone (suiting the age-related decrease in hormone production) between courses of conducting an androgen blockade will help improve the results of treatment of patients with prostate cancer. It's possible that this therapy will be effective for active surveillance of the above-mentioned patients (Pechersky A.V., et al., 2003).
Results: When using a series of phytopreparations (Gentos), one can observe a decrease in the levels of luteinizing hormone, 5α-dihydrotestosterone and estradiol, the increase of which is observed during a decrease in testosterone production.
Conclusion: From this position, the use of a series of phytopreparations among patients with PADAM can be viewed as an analogue to androgen-replacement therapy, and several of the components can be viewed as phytoandrogens (having a similar effect) (Pechersky A.V., et al., 2000). At the same time, phytopreparations can't replace the missing testosterone completely.