

PROSTATE CANCER: A NEWLY DISCOVERED ROUTE FOR TESTOSTERONE TO REACH THE PROSTATE DIRECTLY FROM THE TESTES. NOVEL PATHOPHYSIOLOGICAL MECHANISM

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Introduction: The prostate, an androgen regulated exocrine gland, is an integral part of the male reproductive system that has an essential function in sperm survival and motility. Free testosterone, is the obligatory regulator of the prostate that promotes the development of benign prostate hyperplasia (BPH) and progression of prostate cancer (PCa). Yet the pathophysiologic mechanism and its causal relation to serum testosterone have not been established. Here we report on the discovery of unrecognized route of flow of free testosterone, at a concentration of some 130 times the physiologic levels, reaching the prostate via the testicular and prostate venous drainage systems. This condition results from the malfunction of the vertically oriented testicular venous drainage system in humans (Varicocele).

Material &Methods: 11 prostate cancer patients were treated by super selective intraprostatic androgen deprivation. It is performed by eliminating the flood of free testosterone in huge concentration to the prostate by super-selective venography and sclerotherapy of the network of the impaired testicular and prostate venous drainage systems due to malfunction of the one way valves in the internal spermatic veins.

Results: The treatment has resulted in decrease in prostate volume, and prostate symptoms and disappearance of cancerous cells on repeat biopsies in 7 out of 11 patients with localized prostate cancer.

Conclusion: Pathologic flow of free testosterone in an extremely high concentration from the testes directly to the prostate via the testicular-prostate venous drainage systems was identified. This finding may explain the mechanism for the development of prostate cancer and may resolve several enigmas associate these diseases during the last seven decades. We suggest a time-window for possible eradication of localized PCa cells by super-selective intraprostatic androgen deprivation therapy that may retard, stop and even prevent the evolution of prostate cancer.