

## Transurethral hyperthermia in prostate cancer: a ten year observation study

Dr. Friedrich R. Douwes, MD<sup>1</sup>

(1) St. George Hospital, Rosenheimer Str. 6-8, 83043 Bad Aibling, Germany

### ***Introduction***

Prostate cancer (Pca) is the most frequent cancer of men with approximately 31.500 new cases per year. The most important risk factor is age. Before age 50 clinically evident PCa are extremely rare and in most cases hereditary. More than 90% appears after age 60 and older. Between age 60 and 70 we expect that 50 of 100.000 men per year test positive for PCa and between age 75 and 85 approximately 400 men.

### ***Method***

Between 1999 and December 2000, 123 patients were treated with transurethral hyperthermia at our Prostate Cancer. They were retrospectively evaluated after 10 years. All patients had their prostate cancer verified by biopsy. The clinical stages were between T1-T3. All patients with verified metastases were excluded. None of the patients underwent surgery or radiotherapy. All had denied surgery or radiotherapy by their signature.

Hyperthermia was chosen because with our type of electrothermia it can selectively destroy cancer tissue. Hyperthermia induces apoptosis by inducing p53 and caspase 3 activity. Furthermore it preserves the healthy tissue and keeps it functional. Cancer tissue can be eliminated totally so that the prostate is freed of cancer. Hyperthermia also mobilizes the body's own immunity. It is a non aggressive, non invasive form of treatment.

Our patients were also put on a hormone blockaded because PCa is hormone dependant and androgens stimulate proliferation. Complete androgene blockade inhibits proliferation and causes apoptosis, even in cancer cells outside the prostate e.g in the bone marrow.

### ***Results***

For 26 of the 123 patients (21,3%) a relapse of the PSA was documented. 22 patients (17,9%), 12 caused by cancer (9,5%). Twenty-six patients (21,3%) had later again a hormone therapy and for 8 patients (6,5%) later resection was necessary, but in no case was PCa documented. The proportion of surviving patients was as follows: 3 years: 97%, 5 years: 93%, 10 years: 87%. But most importantly, none of the patients died of PCa.

### ***Conclusion***

Transurethrale thermotherapy is a gentle none invasive treatment, which selectively can eliminate cancer tissue from the prostate. Through a concomitant androgen blockade (CAB), this process can be positively supported, long term. The CAB will be finished after six months to one year. This treatment approach shows that after 10 years 87% of our patients are still without a relapse. If these results could be verified in randomized studies, this could lead to a paradigm change in the treatment of PCa.