WHOLE BODY HYPERTHERMIA IN HORMONE-REFRACTORY AND METASTATIC PROSTATE CANCER

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Objective
In hormone-refractory metastatic prostate cancer further options of treatment up to now are not very promising. Randomized studies using palliative chemotherapy alone show rates of disease control of 15 – 45 %. In this pilot study the effect of a combination treatment of whole body hyperthermia (WBH) and chemotherapy was observed.

Methods
Retrospective study. Whole body hyperthermia (WBH) of 41.5 – 41.8 °C over 60 minutes was induced by whole body infrared-A-irradiation (800 – 1200 nm wave length, Iratherm 2000 device, v. Ardenne, Dresden, Germany). Analgosedation with Propofol and Midazolam.

Patients
15 patients were treated. 14 had metastases in bones and lymph nodes, 1 patient had a large local recurrence and lymph node metastases. All patients had a hormone-refractory disease.

All patients suffered from pain, 2 patients had symptoms of nerve compression (Paralysis of hypoglossus or facial nerve). In 8 patients we used as chemotherapy Mitomycin C (12mg/m2 d1) and Epirubicin (18mg/m2 d1 + 8), WBH at d1. In 7 patients we used Docetaxel (AUC 4.5 on d2) and Carboplatin 50mg total dose d1 + 15), WBH was performed on d2.

Results
In 7/15 patients a PSA decrease of 50 % and more was observed. In 5/13 patients there was no progression and PSA remained stable. In 3 patients PSA increased. Patient with PSA decrease experienced a pain reduction. Even the patients with stable or increasing PSA showed a temporary relief of pain. In both cases with nerve compression the paralysis improved. There were no significant side effects of chemotherapy using Mitomycin C and Epirubicin. Using Docetaxel and Carboplatin 2/7 patients showed hematotoxicity Who-grade 3. The WBH treatment was well tolerated, no side effects occurred.

Conclusion
The combination of WBH with chemotherapy in patients with prostate cancer increases the effectivity of chemotherapy and induces a quick relief of cancer related symptoms like pain.