

Secondary and tertiary recurrence prevention with fever range whole-body hyperthermia in (metastatic) malignant melanoma

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„Secondary and tertiary recurrence prevention with fever range whole-body hyperthermia in (metastatic) malignant melanoma“

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- **Introduction**
- In the concept of biological cancer therapy fever range whole body hyperthermia (wbh) plays an important role, but mostly in palliative situation. In the (early) adjuvant setting, there are only few data.
- **Objectives**
- Since starting work in the internal medicine ambulatory in early 2002 a group of patients is observed, that was treated adjuvant at most high risk constellation after R0 resection with at least two fever range whole body hyperthermia and complementary based therapies (nutrition, lifestyle, vitamin D, selenium and others).
- There is an immunological importance of fever (e.g. rare in cancer patients, spontaneous remissions after fever, remissions after induced fever)
- Research on fever or hyperthermia-induced tumor perfusion, changes of immunological effector cells (NK cells, dendritic cells, tumor-infiltrating cells) and production of heat shock proteins can explain these phenomena. Can tumor patients profit from whole body hyperthermia series in an adjuvant setting concerning tumor survival? Do they have a "second chance" after treatment of first metastases (tertiary)?
- **Patients and methods**
- Three patients with malignant melanoma had surgery with high recurrence risk according to their sentinel lymph node status and/or Clark level (2 x Clark Level IV and Sentinel LK pos., 1x Clark Level IV-V, N0). In a single arm, prospective monocentric study the three patients received a number of 2-20 wbh up to 40°C after surgery without other adjuvant conventional treatments. Every 24 months the study population is evaluated for disease free and overall survival.
- An additional case report: 51-years old patient, who was operated in February 2013 on an ulcerated polypous nodular malignant melanoma of the head left side. After sentinel lymph node extirpation on the neck (right side pos.: 2/8) following neck dissection right side (0/22). The tumor formula was pT4b, pN2a, stage IV (AJCC 2009).
- It was followed by 3-8/13 adjuvant interferon therapy with Roferon A 3 x 3 million IU / week. Already 8/13 evidence of a singular brain metastasis on the right parietal and 9/13 1 x therapy with radiosurgery (cyber knife 20 Gy).
- On 19.9.2013 first presentation and decision to carry out fever range whole-body hyperthermia (9/13-2/15 9x) and other complementary therapies.
- In questionable evidence of pulmonary metastasis in PET-CT 9/13 only slow progress and in 3/15 lung partial resection with histological confirmation of an MM metastasis. Since then, further fever range whole-body hyperthermia (4/15-10/17 9x).
- **Results**
- The three patients with malignant melanoma from the adjuvant group of patients treated with fever range whole body hyperthermia are still alive with NED since FD for already 96, 81 and 65 months.
- The patient with tertiary recurrence prevention shows actually NED: 12/17 MR brain and S-100 (0.025 µg / l), 1/18 PET-CT and lymph nodes ultrasound, 5/18 clinically. So, he has now a tumor free survival since lung surgery of 38 months!
- **Conclusion**
- In the tumor follow up this approach of meaningful complementary basic therapy in combination with fever range whole-body hyperthermia should be more appreciated and evaluated, especially in "immunological" tumors such as malignant melanoma
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