Oncothermia - personalized treatment option

Objective

The personalization of the oncothermic treatments is the new trend in modern medicine [1]. Oncothermia is a personalized treatment by tuned energy delivery to the tumor. Tuning is a function of energy density and is controlled and adjusted by the energy delivery device, which is the key element of the treatment level [2], and makes the dose of energy optimal for cell destruction [3]. The protocol feedback of the patient together with the natural homeostasis control of the treatment process makes the treatment conclusively personalized [4].

Discussion

The main factor of the homeostatic control is physiological, based on the active homeostatic control of the blood-perfusion and blood-flow regulating the energy-mass and heat-exchange in the target. The high blood-flow is an effective heat exchanger, cools the given volume. The well controlled treatment optimizes the current flow-density through the lesion, and optimizes the treatment. One of the crucial points is the surface heat-regulation, which has to be carefully done by the electrode system. Often the surface temperature kept constant, the nerves mainly regulate the current density, which is the clue of the objective regulation. This regulation is also stress-dependent, and a stress level of 30-40% is judged as normal for the treatment. Following the principle of the treatment, the patient is almost comfortable during the treatment, the sedation is only the case for deep-seated treatments of various organs.

This patented technique makes possible
- Temperature measurement is not necessary, the energy control is valid
- We get the highest available RF-current, which does the decisional effect
- Oncothermia is extraordinarily safe and effective
- It is possible to make special protocol proposals for general use, and it modified by patients needs

Conclusion

Oncothermia with its surface stabilized tumor (patented action) now uses the personalizing in the objective of the actual energy dose. This makes possible the accurate and personalized treatment by this method.

References


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