

TREATMENT RESULTS OF NEO-ADJUVANT THERMAL RADIOCHEMOTHERAPY IN OPERABLE OESOPHAGEAL CANCER

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Purpose

To analyse the treatment results of neo-adjuvant regional hyperthermia combined with concurrent radiochemotherapy in oesophageal cancer.

Background

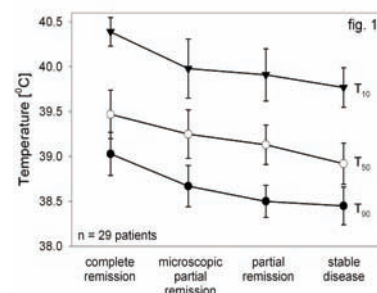
In a phase I study it was concluded that hyperthermia combined with chemotherapy was feasible in the treatment of oesophageal cancer (Albregts et al, *Int. J. Hyperthermia*, 2004). These findings were confirmed in a phase II study in which five weekly hyperthermia sessions were combined with a 5-week radiochemotherapy scheme. Preliminary clinical results on response and survival were promising. The results are updated with extended follow up.

Patients and Methods

Between August 2003 and September 2005, 29 patients with an operable oesophagus tumour entered a phase II study combining five sessions of regional hyperthermia with concurrent radiochemotherapy over a 4.5 weeks period. Radiochemotherapy consisted of weekly carboplatin (AUC = 2) and paclitaxel (50 mg/m²) combined with 41.4 Gy radiotherapy in 1.8 Gy daily fractions. Hyperthermia was given using the 70 MHz AMC-4 waveguide system. Temperatures were measured in the oesophageal lumen at tumor level. Chemotherapy was given concomitantly with hyperthermia. An oesophageal resection was planned at 4-6 weeks after finishing neo-adjuvant treatment. A T3 tumor was present in 94% of the patients and 61% had N1 disease at endosonography. 26 Patients were evaluable for histological response. One patient refused further neo-adjuvant treatment, one patient was not operated because of a vocal cord paralysis which was considered as progressive disease, and one patient died pre-operatively of pulmonary embolism.

Results

A histologically confirmed complete remission rate was found in 19%, residual microscopic tumour foci only in 27%, partial remission in 31% and stable disease in 23%. The resection was microscopically radical in 96%. There was a trend between thermal tumour dose and histological response (fig 1). So far no mediastinal recurrences occurred after resection. 1-year survival is 80%. Quality of life is good for non-recurring patients.



Conclusion

Survival and local control in oesophageal cancer patients after neo-adjuvant regional hyperthermia combined with concurrent radiochemotherapy and followed by resection compare favourable with literature data.