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Meeting abstract

Thermic ablation with RF of liver metastases from colorectal cancer

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Aim of study

Despite advances in screening procedures and the use of adjuvant therapy, approximately 50% of patients with colorectal cancer will develop metastatic disease. Surgical resection is now well accepted as the standard treatment for the liver metastases from colorectal cancer but tumour ablative techniques have been developed in recent years. The goal is to use them in patients with hepatic metastases, which are not totally resectable.

Aim of this study was to evaluate the role of radiofrequency ablation in the treatment of the hepatic metastasis of colorectal cancer (CRC).

Materials and methods

From November 2005 to July 2007 49 radiofrequency ablations have been performed in 19 patients (11 male and 8 female; mean age 65 years: range 50–78 years). The disease-free period was between 5 and 32 months. Hepatic nodules had a diameter inferior to 3 cm in 4 cases, while in 3 cases a single lesion was present. One patient had a single lesion after 2 courses of intravenous systemic chemotherapy, which had a reduced greater lesion (from 6 to 3 cm) while a 2 cm lesion had disappeared. In the remaining 12 patients the mean number of lesions is 3 (range 1–13) with a diameter between 3 and 12 cm. The radiofrequency ablation has been performed during laparotomy and vascular exclusion through clampage of the liver hilum in 4 cases and percutaneously under ultrasound guide in the remaining 15 cases.

All patients underwent follow up by CT scan, CEA level and ultrasound every 3 months.

Results

One patient only has completed a 4 year follow up and is alive without local recurrence but with a cerebral metastasis. The other 18 patients have a 32 months follow-up with a survival of 50% (9 on 18).

Conclusion

Percutaneous, image guided, tumour ablation with thermal energy source, microwaves or laser has received increasing attention permitting the destruction of tumours without necessitating their removal and in many cases can be used in place of invasive and expensive techniques.

Radiofrequency current, converted into heat through ion agitation and friction, can destroy liver tumours by means of coagulation necrosis.

In clinical grounds RF ablation has been used for the treatment of different neoplasms including osteoid osteoma, hepatocellular carcinoma, renal cells carcinoma, hyperfunctioning adenoma and hepatic, cerebral and retroperitoneal metastases from several primary tumours.

In conclusion in our experience the radiofrequency ablation is a valid alternative method in the treatment of the hepatic metastasis of colorectal cancer.