The possible role of radiofrequency as complementary treatment of locally advanced gastric cancer

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Riassunto

LA RADIOFREQUENZA COME TRATTAMENTO COMPLEMENTARE DEL CARCICOMA GASTRICO LOCALMENTE AVANZATO

Scopo: *La prognosi dei tumori gastrici localmente avanzati (T3-T4) è severa. La presenza di metastasi linfatiche (N3-N4) o a distanza (fegato, polmone) aggrava la prognosi, principalmente le metastasi epatiche sono causa di una bassa sopravvivenza.*
L'uso di un trattamento palliativo quale l'ablazione mediante radiofrequenze (i cui buoni risultati sulle metastasi epatiche da K del colon-retto sono noti) è segnalato in recenti studi.
Spinti da questi dati abbiamo utilizzato la termoablazione mediante radiofrequenze per il trattamento delle metastasi epatiche da K gastrico nei casi difficilmente o non operabili.
Materiali e metodi: *Dal gennaio 2001 a dicembre 2002, 25 pazienti affetti da metastasi epatiche sono stati sottoposti a termoablazione mediante radiofrequenze, in 2 casi si è trattato di metastasi da adenocarcinoma gastrico.*
Caso 1: *A.P., 58 anni, operato un anno prima di Billroth II, dopo ripetuti cicli di chemioterapia, ha manifestato la comparsa di metastasi epatiche al IV segmento. Sottoposto a termoablazione con radiofrequenza si è avuta la scomparsa delle metastasi. Dopo tre mesi si è avuta una recidiva trattata con alcoolizzazione. Tre mesi dopo si è manifestato un ittero ingravescente dovuto a metastasi diffuse seguito dal decesso.*
Case 2: *B.G., 63 anni, con un adenocarcinoma gastrico avanzato (T4) al livello del piloro e una metastasi epatica al IV segmento. Il paziente è stato sottoposto a gastrodigiunostomia + ablazione intraoperatoria mediante radiofrequenza della metastasi epatica. Eseguito controllo ecografico e Tc prima della dimissione.*
Rifiutati i controlli, il paziente torna dopo 7 mesi con ittero ingravescente per presenza di diffuse metastasi epatiche; rifiutato ogni trattamento si ha il decesso dopo un mese.
Conclusioni: *I nostri risultati preliminari non mostrano complicanze intra e peri-operatorie correlate al trattamento con radiofrequenze, con un importante aumento della sopravvivenza media. I risultati, anche se su un'esperienza limitata, indicano un possibile ruolo complementare della radiofrequenza nel trattamento palliativo delle metastasi epatiche da K gastrico avanzato, non o difficilmente aggredibili chirurgicamente.*
Parole chiave: Stomaco, adenocarcinoma, gastrodigiunostomia, trattamento palliativo, radiofrequenza.

Introduction

Adenocarcinoma of the stomach is more common in the elderly than in the adults (mean 62-70 years). In the last years its incidence decreases and contemporary improvements of the survival were noted after curative resection from 20% to 50% (1).
Men are affected more than women (ratio of 2:1).
The intestinal type is more frequent in the elderly, and presents a better prognosis; contrary the diffuse type is frequent in the young and presents a worse prognosis. About 40% of the cases are developed in the antrum. Important for the diagnosis is the role of gastroscopy with multiple biopsies in case of doubt.
Currently the best therapy for gastric cancer is surgical resection.
This technique entails a subtotal (3/4) gastrectomy, including the first duodenal part, the omentum, and the gastrohepatic, gastrocolic, and hepaticoduodenal lymph nodes removal.
Contrary the attendances, the gastric resection of locally advanced adenocarcinoma has had good results. Perioperative mortality rate averages around 10%, with 5-year survival of 26% (2).
If at the time of diagnosis an advanced adenocarcinoma was found, gastrectomy was recommended if possible, a palliative gastrojejunostomy when it was impossible (3).

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Abstract

Aim: *The prognosis of locally advanced gastric cancer (T3-T4) is bad. The presence of lymph nodes (N3-N4) or haematogenous metastases (liver, lung) gets worse the evolution; principally the hepatic malignancies are cause of scarce survival.*
The possible use of a palliative treatment as radiofrequency ablation (the good results are note about the treatment of hepatic malignancies by colo-rectal cancer) is reported in recent series.
Therefore we decide to use radiofrequency ablation for the treatment of hepatic metastases by gastric cancer, difficulty treated surgically.
Materials and methods: *From January 2001 to December 2002, 25 patients affected by hepatic metastases underwent to radiofrequency thermal ablation, 2 of them were affected by gastric adenocarcinoma.*
Case 1: *A.P., 58 year-old man, one year before underwent to subtotal gastric resection according to Billroth II. After repeated postoperative chemotherapy cycles, he presented metastases at IV hepatic segment. The patient underwent to percutaneous radiofrequency ablation. The control CT scan confirmed metastasis disappearance. After three months, a partial recurrence was treated by the alcoholization. Three months after, we observed ingravescent jaundice for multiple diffused metastases, followed by the exitus.*
Case 2: *B.G., 63 year-old man, with advanced gastric adenocarcinoma (T4) at the pylorus and hepatic metastasis at IV segment. The patient underwent to gastrojejunostomy and to intraoperative radiofrequency ablation. Ultrasonography and CT scan controls were performed before discharge.*
The patient didn't undergo to successive controls. After 7 months, the patient returned with ingravescent jaundice for diffused hepatic metastases; he refused any treatment, and then he died one month after.
Conclusions: Our preliminary results don't show complications related to the intra and peri-operative radiofrequency, with an important increase of the mean survival. The results, limited by poor experience, may indicate the complementary role of the radiofrequency in the palliative treatment of the hepatic metastases by advanced gastric cancer, difficulty treated surgically.
Key words: Stomach, adenocarcinoma, gastrojejunostomy, palliative treatment, radiofrequency.

The presence of the hepatic malignancies is cause of scarce survival, for the jaundice derived by their compression.
Many adjuvant therapies have been experimented to improve the prognosis of these patients.
Intraoperative radiotherapy may improve the survival of the patients in stage II and III. Postoperative chemotherapy with 5-fluorouracil, mitomycin and methotrexate, eventually associated to postoperative radiotherapy may improve survival, but for the elderly patient adjuvant therapies must be indicated and valued carefully.

At present, for the patients with locally advanced adenocarcinoma of the stomach with liver metastases, the radiofrequency ablation was proposed and realized (4) as complementary and palliative treatment.
According to previous series (5) where radiofrequency thermal ablation was used for the treatment of the liver metastases derived by gastric adenocarcinoma, usually untreated surgically, our group decided to prove this method.

Materials and methods

From January 2001 to December 2002, 25 patients affected by hepatic metastases underwent to radiofrequency thermal ablation, 2 of them were affected by gastric adenocarcinoma.

Case 1: A.P., 58 year-old man, one year before underwent to subtotal gastric resection according to Billroth II. After repeated postoperative chemotherapy cycles (with 5-fluorouracil), ultrasonography and CT scan hadn't shown metastases after one year. A new ultrasonography, after one month, has shown a metastasis at IV hepatic segment. The patient underwent to percutaneous radiofrequency ablation under narcosis. The control CT scan confirmed metastasis disappearance. After three months, a control ultrasonography has shown a partial recurrence of the metastasis at the same segment. Then we performed two alcoholization of the lesion. Three months after, CT scan we observed ingravescent jaundice and the appearance of multiple diffused metastases documented by CT scan, followed by the exitus 15 days after.

Case 2: B.G., 63 year-old man, admitted in the hospital for hematemesis. Gastroscopy has detected an advanced gastric adenocarcinoma at the pylorus with gastrectasy and recent haemorrhage. Medical therapy arrested the haemorrhage. Ultrasonography and CT scan has shown an advanced gastric cancer (T4) with hepatic metastasis at IV segment. The patient underwent to gastrojejunostomy and, at the same time, to intraoperative radiofrequency ablation. Ultrasonography and CT scan controls have shown the metastasis disappearance, and then the patient was discharged.
For six months the patient didn't undergo to the controls. After 7 months, the patient returned with ingravescent jaundice. Ultrasonography has shown diffused hepatic metastases; he was voluntary discharged, then he died one month after.

Discussion

Surgery is the primary curative treatment for advanced tumours of the stomach. Total or subtotal resection has

had good results in perioperative mortality rate and 5-year survival. These results has had good especially in the elderly, because the principal type of tumours found was the intestinal characterized by better prognosis, then an aggressive surgical approach in the elderly is justified. Despite improvements in surgical and anaesthetic techniques, gastric resection is impossible everywhere, in some cases, when an incurable situation is discovered, a palliative gastrojejunostomy is elective intervention.

Last years, many adjuvant therapies have been found to improve the survival of these patients. Intraoperative radiotherapy, postoperative chemotherapy and their combination must be weighed carefully for their general implications.

In the patients with advanced gastric adenocarcinoma is possible to find liver metastases combined. This revelation can appear in the preoperative studies, during the intervention or after months in the follow-up.

At present, for the patients with primary or secondary liver tumours some Authors proposed and published, with good results, interesting studies (4-5) about the use of the radiofrequency thermal ablation of these liver lesions, in some cases completed by alcoholization.

Encouraged by these series, we have started to use radiofrequency ablation in critical patients with hepatic tumours (6-7).

When hepatic malignance was found during the follow-up, radiofrequency ablation is a valid alternative to major hepatic surgical resection, with a better survival (1-7), when the general patients' conditions are serious and the local rapports may be suggest avoiding traditional surgical treatment. This happened in the first case.

In the second case, during the intervention a hepatic metastasis was found, intraoperatively treated by laparotomic radiofrequency ablation, for the difficult offered by the site of the lesion and to avoid the patient a major surgical stress.

Conclusions

Our preliminary results didn't show complications related to the, percutaneous or laparotomic, radiofrequency and may prove the role of this method in association with the other therapeutic tools (surgery, radiotherapy, chemotherapy) to improve survival and quality of life in the patients with hepatic metastases by advanced gastric cancer.

Obviously to draw any conclusions from two patients is virtually impossible. The technique is safe but these patients have to be compared to patients who have resection.

Actually this method can be proposed in critical patients, as elderly patients with poor general conditions, thanks to its low complications rate.

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