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Letter to the Editor

Combined microwave thermal ablation and liver resection for single step treatment of otherwise unresectable colorectal liver metastases; a monoistitutional experiences

Dear Editor,

It is well known that hepatic resection is the only treatment that currently offers a chance of long-term survival in patients with colorectal cancer (CRC) liver metastases (LM), and is associated with 5-year survival rates ranging from 25 to 37%[1,2]. However, it is estimated that a curative surgery can be performed in only 10% of all patients with CRC-LM on the basis of current indications of surgery[1-3].

For the remaining majority, who fall outside these indications, the prognosis is poor[3].

Traditional limits to hepatic resection (multiple metastases, anatomical limitations, inadequate functional liver reserve, extrahepatic metastases, or medical comorbidities) have been exceeded as advancement in technology and surgical technique enable safe resection of up to 80% of the functional liver parenchyma with a mortality of 5% or less in major centers[1,2].

The use of loco-regional therapies (TACE, RFA, PEI), in association with systemic chemotherapy (CT), to treat frail patients and/or patients with unresectable LM from CRC represent a valid alternative to control liver disease. Moreover the loco-regional therapies (TACE) can be used in patients candidates to two stage hepatectomy for initially unresectable (bilobar LM) liver disease.

Recently Tropea et al[4] described the current options regarding the use of MW as ablative treatment for LM from CRC.

They reported data on only 5 patients with bilobar CRC-LM, treated with upfront CT, successively excluded from surgery liver treatment due to high risk of complications.

The MW coagulation involves placing an electrode into a lesion under ultrasound or computed tomography guidance. The MW coagulator generates and transmits mw energy to the electrode. An alternating high frequency (up to 2459 MHz) electromagnetic wave causes molecular vibration of dipoles, which produces heat and thermal coagulation around the electrode. Coagulative necrosis causes cellular death in reduction of tumor size.

Moreover the MW ablation is indicated to treat lesion up to 7 cm[4] and it represents and important aspect in patients not eligible for systemic CT (i.e. comorbidities, frail patients, WHO PS > 2) or in patients with chemo-resistant cancer disease.

In addition, proximity to vascular structure is not considered a problem with MWs and overall there are less cycles of intra operative treatment and the length of procedure is much shorter.

Another consideration is that in the unresectable or/and frail patients, the combination of tailored systemic CT, as upfront approach, and successively, in the responder patients, the use of MW ablation represent a valid and safe local approach to control liver disease.

The authors concluded that the results obtained are encouragingly and they suggest this kind of approach in patients refusing 2nd operations and in so called frail patients (i.e. elderly, HIV-positive patients)[5-8].

I think that in the complex oncologic scenario the multidisciplinary approach and the use of tailored treatment represent the goal to obtain efficacy response with good safety, especially in particular setting of patients9 extending this treatment to other liver cancer disease[10].

Conflict of Interest

The Authors declare that they have no conflict of interests. The authors of this study did not receive any financial support for this submission.

Corresponding Author: Salvatore Berretta, MD; e-mail:berretta@unict.it

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R. Fisichella, D. Spartà, S. Berretta
Department of Surgery, University of Catania, Catania, Italy