Lefter to the Editor

Comment on: Short-term effect of metronomic chemotherapy of low dose Tegafur on patients with primary hepatic carcinoma after radiofrequency ablation

Dear Editor,

We read with great interest the review by Ma et al1 about "Short-term effect of metronomic chemotherapy of low-dose Tegafur on patients with primary hepatic carcinoma after radiofrequency ablation". Hepatocellular carcinoma (HCC) represents the most common primary cancer and despite the advances in oncological and surgical treatments, HCC is still a global burden, representing the third cancer-related cause of death worldwide²⁻⁴. Overall, we believe that a multidisciplinary panel should provide a tailored approach for each patient, considering both guideline indications and patient-specific characteristics, enhancing the hospital-specific best practice. The trend in the evaluation of HCC is still bi-dimensional, focusing on tumor dimension and number as prognostic factors and key elements in the decision-making process of HCC. A range of therapies are used in the management of HCC; the best outcomes are observed in patients who fulfil the criteria to undergo liver transplantation, surgical resection or loco regional therapies including transarterial chemoembolization (TACE), radiofrequency ablation (RFA) and percutaneous ethanol injection (PEI). We firmly believe that the multidisciplinary approach in this kind of cancer disease is mandatory to obtain the best results in terms of control of local disease, progression free-survival (PFS) and overall survival (OS). This manuscript is a typical example of multidisciplinary approach and the authors used the metronomic Tegafur (Gimeracil and Oteracil Potassium Capsules)⁵, an oral chemotherapeutic agent derived from fluorouracil for its good safety profile and strong anti-angiogenic effect. The process of angiogenesis consists of multiple, and mutually dependent steps. It begins with local degeneration of the basement membrane near capillaries, then by the invasion of the nearby stroma by the primary endothelial cells in the direction of the angiogenic stimuli. Endothelial cells migration is followed by the increase of endothelial cells, organized into 3D structures joining with new analogous structures forming a system of new blood vessels⁶⁻¹⁰. More recently, the identification of cellular pathways playing a key role in the pathogenesis of HCC, primarily neoangiogenesis, has led to development of targeted drugs⁶. The authors treated a total of 114 patients divided in two groups: RFA group and RFA + Tegafur group. The statistical methods adopted were appropriate for this kind of study and the results obtained were interesting. The clinical characteristics of the patients and HCC disease are similar between two groups. About response rate the PFS, at 1 year was 71.9% (41/57), in the RFA+Tegafur group vs. 45.6% (26/57) in the RFA group. A significant difference in 1 year PFS was observed between the two groups (p=0.004). The disease control rate (DCR) was 93.3% and 73.4% in the RFA+Tegafur and RFA groups, respectively (p=0.038). Moreover, it is interesting to observe that there was a significant difference in the median PFS between two groups (p=0.008) in favor of RFA+Tegafur group. No differences were found according to CHILD-Pugh A and CHILD-Pugh B score and the number of tumor lesions about liver function grades and PFS. The choice of antiblastic drug (AD) as Tegafur, with antiangiogenic activity and according to biological characteristic of the HCC and concomitantly with loco-regional therapy (RFA), represents the goal to obtain a better DCR with a good safety profile. We agree with this kind of therapeutic approach that can be identified as the concept of tailored treatment in the Tegafur*RFA group. Another important aspect, considering the clinical contest and results obtained, is the cost of the AD used, acceptable and compared to new drugs available.

In conclusion, this kind of study is important to improve the knowledge about treatment of HCC and in this particular setting of patients the importance of multidisciplinary approach with the aim to obtain better therapeutic results, in terms of DCR and at the same time to preserve the quality of life.

Conflict of interest

The authors declare no conflicts of interest.

References

- MA CL, Sun RJ, Li J. Short-term effect of metronomic chemotherapy of low-dose tegafur on patients with primary hepatic carcinoma after radiofrequency ablation. Eur Rev Med Pharmacol Sci 2018; 22: 3742-3748.
- 2) DI BENEDETTO F, TARANTINO G, ERCOLANI G, BACCARANI U, MONTALTI R, DE RUVO N, BERRETTA M, ADANI GL, ZANELLO M, TAVIO M, CAUTERO N, TIRELLI U, PINNA AD, GERUNDA GE, GUARALDI G. Multicenter Italian experience in liver transplantation for hepatocellular carcinoma in HIV-infected patients. Oncologist 2013; 18: 592-599.
- 3) CANZONIERI V, ALESSANDRINI L, CAGGIARI L, PERIN T, BERRETTA M, CANNIZZARO R, DE RE V. Hepatocellular carcinoma: an overview of clinico-pathological and molecular perspectives WCRJ 2015; 2: e485.
- 4) BIONDI A, MALAGUARNERA G, VACANTE M, BERRETTA M, D'AGATA V, MALAGUARNERA M, BASILE F, DRAGO F, BERTINO G. Elevated serum levels of Chromogranin A in hepatocellular carcinoma. BMC Surg 2012; 12 Suppl 1: S7.
- 5) Berretta M, Di Francia R. Comment on "Tegafur gimeracil oter combined with oxaliplatin for advanced colorectal cancer." Is it cost effectiveness? Eur Rev Med Pharmacol Sci 2016; 20: 5-6.
- 6) Berretta M, Rinaldi L, Di Benedetto F, Lleshi A, De Re V, Facchini G, De Paoli P, Di Francia R. Angiogenesis inhibitors for the treatment of hepatocellular carcinoma. Front Pharmacol 2016; 7: 428.
- 7) DI MARTINO S, RAINONE A, MAROTTA G, MAZZARELLA M, PUGLIESE S, RINALDI L. Nutraceutical agents with hepatoprotective effects in cancer patients WCRJ 2016; 3: e788.
- 8) Berretta M, Cavaliere C, Alessandrini L, Stanzione B, Facchini G, Balestreri L, Perin T, Canzonieri V. Serum and tissue markers in hepatocellular carcinoma and cholangiocarcinoma: clinical and prognostic implications. Oncotarget 2017; 8: 14192-14220.
- 9) Berretta M, Di Francia R, Tirelli U. The new oncologic challenges in the 3RD millennium. WCRJ 2014; 1: e133.
- 10) DI Francia R, Rinaldi L, Troisi A, Di Benedetto F, Berretta M. Effect of anti-oxidant agents in patients with hepatocellular diseases. Eur Rev Med Pharmacol Sci 2015; 19: 3993-3995.

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