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Letter to the Editor

Serum CA-125 and renal impairment in patients undergoing hyperthermic intraperitoneal chemotherapy

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To the Editor,

In their article regarding recurrent ovarian cancer patients undergoing secondary cytoreductive surgery and hyperthermic intraperitoneal chemotherapy (HIPEC), Chen and colleagues [1] did not find a statistically significant association between renal impairment and serum cancer antigen-125 (CA-125) before HIPEC. However, the proportion of renal failure observed in women with CA-125 > 100 U/ml was almost twice that of patients whose values were below the cut-off point established by the authors (21.7% vs 42.9%, p = 0.097). This finding has attracted our attention, in view of the remarkable proportion of patients receiving drugs with nephrotoxic potential.

Although the exact biological role of CA-125 has not been fully elucidated, preclinical models and observations from non-malignant diseases [2,3] have previously suggested that this biomarker could not only reflect the tumor mass, but may also act as an indirect parameter of peritoneal integrity, given the acknowledged synthesis by mesothelial cells and its high molecular weight, hindering its transit through the peritoneal membrane [4]. Therefore, a higher serum CA-125 might also be linked with a pre-HIPEC enhanced peritoneal permeability, which could increase the potential toxicity of some drugs administered. In this regard, all subjects with outstanding kidney impairment in the study by Chen et al. [1] showed at least 100 U/ml of CA-125 values and were treated with cisplatin, a chemotherapy agent with a well-known nephrotoxic capacity [5].

Unfortunately, pre-treatment serum CA-125 has been scarcely assessed in similar reports such as the recently published in Biomedical Journal [1], so the data concerning this glycoprotein should not go unnoticed despite the lack of statistical significance. In our opinion, CA-125 before HIPEC should be also included as a variable in future studies, in order to assess the intriguing role of this biomarker as a possible predictor of renal failure in patients treated with potentially nephrotoxic intraperitoneal chemotherapy.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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