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Letter to the Editor

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

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To the Editor,

David et al. mentioned a point that the correlation of CA125 and acute kidney injury in our article should be noticed [1]. In our research, the variates analysis showed that patients with CA125 ≥ 100 had a trend with higher rates of acute kidney injury than those with CA125 < 100 (42.9% vs. 21.7%, $p = 0.097$). Besides, no obvious differences were found in variates including age, body mass index (BMI), peritoneal

carcinomatosis index (PCI) score, and operation time. In their opinion, patients with higher serum CA125 level might be associated with enhanced peritoneal permeability that could increase the renal toxicity of cisplatin rarely described in the literatures.

We recognize their hypothesis. Kidney function has always been an important issue for patients receiving hyperthermic intraperitoneal chemotherapy (HIPEC) with cisplatin-containing regimen. Several studies reported incidence of acute renal toxicity after HIPEC at 0.5%–48%, and subsequent influences on the survival as well as quality of life [2]. We suggest using RIFLE classifications rather than Common Terminology Criteria for Adverse Events (CTCAE) to assess post-operative renal function because RIFLE not only includes serum creatinine but also urine output change that help early detection and management of acute kidney injury [3].

Cata et al. reported risk factors of acute renal injury including old age, obesity, ureter stents use, cisplatin/oxaliplatin regimen, or blood loss increments [4]. Other risk factors were also reported in the literatures including lower intraoperative urine output, use of angiotensin receptor blockers (ARBs), hypertension, and use of peritoneal dialysis solution as HIPEC perfusate [2]. Surgery-related cytokine release to induce prerenal acute kidney injury via vasodilatation of splanchnic vessels and further hypovolemia had also been reported [5].

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Some studies suggested using amifostine or sodium thiosulfate as a prevention of cisplatin-related nephrotoxicity [2].

To clarify the relationship of CA125 level with acute kidney injury in patients receiving, further study for validation of markers including CA-125 may provide a definitive answer.

Conflicts of interest

The authors declare that they have no competing interests.

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