□ LETTERS TO THE EDITOR □

All That Glitters: Sorafenib

Key words: sorafenib, tumor lysis syndrome, hepatocellular carcinoma

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To the Editor This letter is in regard to the article recently published in Internal Medicine by Joshita et al (1) In that paper the authors report a case of “hepatocellular carcinoma who avoided tumor lysis syndrome following massive tumor lysis from treatment with sorafenib”. We share our experience managing a patient with tumor lysis syndrome (TLS) with advanced hepatocellular carcinoma who received sorafenib.

A 62-year-old Caucasian man with a past medical history of alcoholism and hepatitis B presented with right hypochondrial pain. The ultrasound of his liver showed a mass in the right posterior lobe measuring approximately 8.7 cm×8.0 cm. Pretreatment laboratory tests were as follows: aspartate aminotransferase 230 IU/L; alanine aminotransferase 53 IU/L; lactate dehydrogenase 1,097 IU/L; creatinine 0.70 mg/dL; potassium 3.6 mmol/L; calcium 8.7 mg/dL; alpha-fetoprotein 133,316 ng/mL. He was started on sorafenib 800 mg/day. After 7 days of treatment he became somnolent and confused. His repeat laboratory tests were: aspartate aminotransferase 25,182 IU/L; alanine aminotransferase 4,839 IU/L; lactate dehydrogenase 35,906 IU/L; uric acid 17.2 mg/dL; phosphorous 15.6 mg/dL; creatinine 3.8 mg/dL; potassium 7.2 mmol/L; alpha-fetoprotein 66,734 ng/mL; calcium 6.4 mg/dL. We did not have his baseline uric acid and phosphorous levels. According to the diagnostic criteria for TLS as defined by Cairo-Bishop, the review of his laboratory tests suggested grade 2 clinical TLS. He chose comfort care and declined dialysis. He died on day 8.

TLS is a metabolic disorder that results from the rapid breakdown of many tumor cells, usually on the start of chemotherapy. This breakdown leads to a significant release of intracellular metabolites that exceeds the ability of the kidney to excrete them. TLS rarely happens in solid tumors, including hepatocellular carcinoma, but occurs more frequently in hematologic malignancies. Phase 2 and 3 trials of sorafenib did not report patients with TLS (2). However, since this may be the fourth documented case of TLS using drug treatment, sorafenib may cause TLS or severe renal impairment in advanced hepatocellular carcinoma patients. Reduced-dose therapy and careful follow-up after the start of therapy may be needed in such patients for early diagnosis and treatment (1-3). Since sorafenib can be used for outpatients, it may be beneficial to perform baseline laboratory testing and to have laboratory work done more frequently within the first few weeks. If more cases such as we report are documented, pretreatment management for TLS may become the prudent standard of care.

The authors state that they have no Conflict of Interest (COI).

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