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DOI: 10.17235/reed.2020.6440/2019

Link: [PubMed \(Epub ahead of print\)](#)

Please cite this article as:
Díaz Alcázar María del Mar, Cervilla Sáez de Tejada Eloísa,
Ruiz Escolano Elena. Rhabdomyolysis in a patient under
treatment with sorafenib. Rev Esp Enferm Dig 2020. doi:
10.17235/reed.2020.6440/2019.



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ACCEPTED MANUSCRIPT

CC 6440 inglés

Rhabdomyolysis in a patient under treatment with sorafenib

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Keywords: Sorafenib. Rhabdomyolysis. Hepatocellular carcinoma.

Dear Editor,

We present the case of a 76-year-old male with alcoholic cirrhosis and multifocal hepatocellular carcinoma under treatment with sorafenib. Since the beginning of the treatment, he had leg edema, asthenia and fatigue, all of which reduced his quality of life. The neurological examination showed 4/5 strength in the upper limb and 2/5 in the lower limb. Creatinine levels were 2.91 mg/dl, AST 423 U/l, ALT 153 U/l and creatine kinase 8,664 U/l. The patient worsened even after stopping sorafenib treatment and intensive hydration. According to the blood tests, there was a worsening of renal function (creatinine 4.22 mg/dl) in the context of rhabdomyolysis (creatinine kinase 13,943 U/l) and he finally died.

Case report

Rhabdomyolysis is the consequence of extensive muscle necrosis due to different causes as trauma, epileptic crisis, electrolyte imbalance, infections or drugs. There are elevated levels of serum creatine kinase and frequently, a deterioration in renal function. Leakage of myoglobin from the muscle plugs the kidney under acidic conditions. Thus, early fluid resuscitation is crucial (1). Rhabdomyolysis related to sorafenib is a potentially life-threatening condition and there are no laboratory tests

which help to predict the risk of rhabdomyolysis. Thus, early diagnosis is critical. Rhabdomyolysis related to sorafenib treatment is a rare adverse effect and all of the cases have been identified during the post-approval use phase (1,2).

Sorafenib is a multikinase inhibitor that targets the RAF/MEK/ERK pathway, which is involved in angiogenesis and tumor growth. It is used for the treatment of hepatocellular carcinoma and other hypervascular tumors. The mechanism of rhabdomyolysis related to the treatment is unclear. A significant weight loss has been described in patients taking sorafenib, which was associated with a significant reduction in skeletal muscle mass. Although the mechanism of this muscle loss is unclear, it has been suggested that kinases may play a relevant role in the regulation of muscle protein synthesis (2,3).

To conclude, rhabdomyolysis could be an infrequent adverse effect of treatment with sorafenib. It is potentially fatal and should be taken into account when used for patients.

References

1. Hohenegger M. Drug induced rhabdomyolysis. *Curr Opin Pharmacol* 2012;12:335-9. DOI: 10.1016/j.coph.2012.04.002
2. Tsuji K, Takemura K, Minami K, et al. A case of rhabdomyolysis related to sorafenib treatment for advanced hepatocellular carcinoma. *Clin J Gastroenterol* 2013;6:255-7. DOI: 10.1007/s12328-013-0381-2
3. Antoun S, Birdsell L, Sawyer MB, et al. Association of skeletal muscle wasting with treatment with sorafenib in patients with advanced renal cell carcinoma: results from a placebo-controlled study. *J Clin Oncol* 2010;28(6):1054-60. DOI: 10.1200/JCO.2009.24.9730