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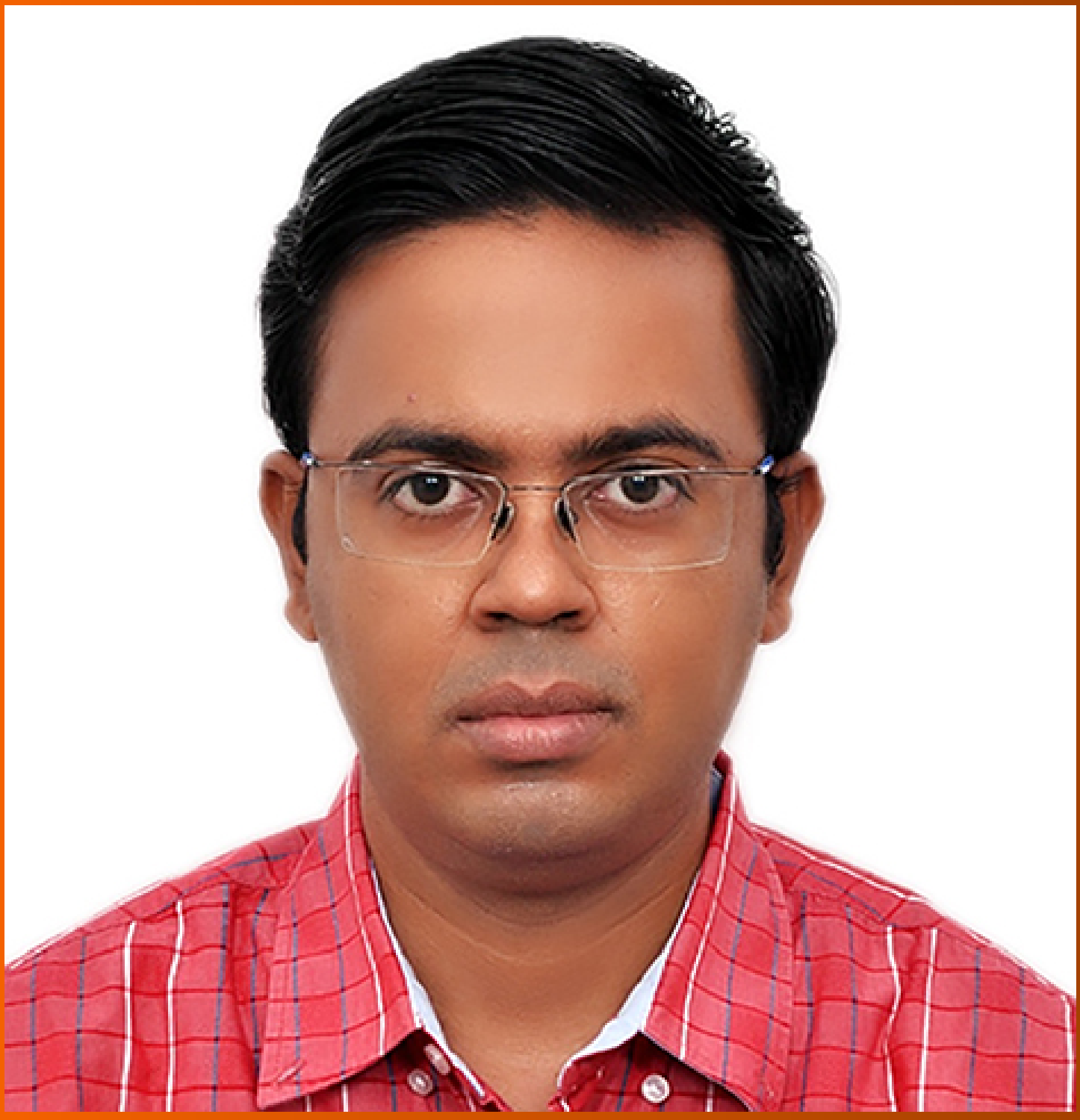

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LETTER TO THE EDITOR

Rhabdomyolysis-related acute kidney injury in COVID-19: A critical concern

Md Safiullah Sarker

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Abstract

Rhabdomyolysis is a severe condition characterized by the breakdown of muscle tissue leading to the release of intracellular components into the bloodstream. This condition, when associated with acute kidney injury (AKI), can result in significant morbidity and mortality, particularly in the context of coronavirus disease 2019 (COVID-19). This editorial discusses a retrospective study on patients with COVID-19 who developed rhabdomyolysis-related AKI. The study highlights that patients with rhabdomyolysis exhibited higher inflammatory markers, such as C-reactive protein, ferritin, and procalcitonin, and experienced worse clinical outcomes compared to those with other causes of AKI. The findings underscore the importance of early recognition and management of rhabdomyolysis in COVID-19 patients to improve prognosis and reduce mortality rates.

Key Words: Rhabdomyolysis; Acute kidney injury; COVID-19; SARS-CoV-2; Creatine kinase; Inflammation; Prognosis; Mortality

Core Tip: Rhabdomyolysis is a significant complication in coronavirus disease 2019 (COVID-19) patients, leading to severe acute kidney injury (AKI) with high mortality rates. This editorial highlight a study that found higher inflammatory markers and worse outcomes in patients with rhabdomyolysis-related AKI compared to other causes of AKI. Early detection and appropriate management are crucial to mitigate the adverse effects of this condition in the context of COVID-19.

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TO THE EDITOR

Rhabdomyolysis, a syndrome resulting from the breakdown of muscle fibers with the release of muscle cell contents into the bloodstream, can cause life-threatening complications such as acute kidney injury (AKI). In the context of coronavirus disease 2019 (COVID-19), rhabdomyolysis has emerged as a critical concern due to its potential to exacerbate the already complex clinical presentations associated with the virus. This editorial explores the findings of a study conducted on COVID-19 patients who developed rhabdomyolysis-related AKI and discusses the implications for clinical practice[1-3].

Rhabdomyolysis and COVID-19

The study[1] in question involved 115 COVID-19 patients who developed AKI, 15 of whom were diagnosed with rhabdomyolysis. These patients were found to have significantly higher levels of inflammatory markers, including C-reactive protein (CRP), procalcitonin, and ferritin, compared to those with AKI from other causes. The elevated inflammatory response likely reflects the severity of rhabdomyolysis in the setting of COVID-19 and its contribution to the overall disease burden[4].

Clinical outcomes

Patients with rhabdomyolysis-related AKI had markedly worse clinical outcomes, with a mortality rate of 73.3%, significantly higher than the 18.1% observed in patients with AKI due to other causes[1]. This stark contrast underscores the need for heightened clinical awareness and proactive management strategies for rhabdomyolysis in COVID-19 patients[5].

Implications for practice

The findings from this study[1] suggest that early identification and aggressive management of rhabdomyolysis in COVID-19 patients could be pivotal in improving outcomes. Monitoring markers such as creatine kinase, CRP, and ferritin should be an integral part of the management protocol for COVID-19 patients at risk of rhabdomyolysis[6].

Rhabdomyolysis complicates the clinical course of COVID-19 and significantly increases the risk of mortality in patients who develop AKI. This editorial emphasizes the need for clinicians to be vigilant in recognizing and managing this condition to mitigate its impact on patient outcomes[7].

FOOTNOTES

Author contributions: Sarker MS designed and conceptualized the study, performed data acquisition, analysis, and interpretation, drafted the first version of the manuscript, commented on consecutive versions, and approved the final version.

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