

100160_Auto_Edited_080858.docx

WORD COUNT

573

TIME SUBMITTED

25-SEP-2024 04:12PM

PAPER ID

111930038

Name of Journal: *World Journal of Virology*

Manuscript NO: 100160

Manuscript Type: LETTER TO THE EDITOR

Rhabdomyolysis-Related Acute Kidney Injury in COVID-19: A Critical Concern

Rhabdomyolysis and AKI in COVID-19 Patients

Md. Safiullah Sarker

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 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

Sarker MS. Rhabdomyolysis-Related Acute Kidney Injury in COVID-19: A Critical Concern. *World J Virol* 2024; In press

Core Tip: Core Tip

Rhabdomyolysis is a significant complication in COVID-19 patients, leading to severe acute kidney injury (AKI) with high mortality rates. This editorial highlights 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.

Introduction

Rhabdomyolysis, a ¹ 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 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[2].

Rhabdomyolysis and COVID-19

The study in question involved 115 COVID-19 patients who developed AKI, 15 of whom were diagnosed with rhabdomyolysis. These patients were found to have significantly ² 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[3].

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. This stark contrast underscores the need for heightened clinical awareness and proactive management strategies for rhabdomyolysis in COVID-19 patients[4].

Implications for Practice

The findings from this study 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[5].

Conclusion

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[6].

ACKNOWLEDGEMENTS

I would like to acknowledge the contributions of all healthcare professionals involved in the care of COVID-19 patients and the researchers who conducted the original study that formed the basis of this editorial.

ORIGINALITY REPORT

4%

SIMILARITY INDEX

PRIMARY SOURCES

1	academic.oup.com Internet	15 words — 2%
2	rupress.org Internet	12 words — 2%

EXCLUDE QUOTES ON

EXCLUDE BIBLIOGRAPHY ON

EXCLUDE SOURCES < 12 WORDS

EXCLUDE MATCHES < 12 WORDS