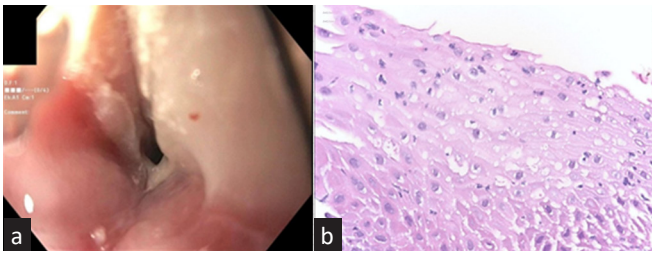

Figure 1: (a) Upper endoscopy showing benign intrinsic severe distal esophageal stricture, (b) Stricture biopsy showing focal acute inflammation. Hematoxylin and Eosin stain x400.

blockade of guanosine nucleotide synthesis upon which the rapidly replicating enterocytes partially depend on, thus disrupting the GI epithelial barrier.[3] MMF metabolites, including mycophenolic acid acyl-glucuronide, can elicit hypersensitivity and autoimmune reactions.[4]

MMF should be considered as a potential etiology for dysphagia from the esophageal stricture in a transplant recipient, especially when common etiologies such as reflux esophagitis and infectious esophagitis are excluded. A high index of suspicion is needed for early diagnosis and timely discontinuation of MMF, since a delay in the diagnosis can contribute to significant morbidity.

Conflicts of interest: There are no conflicts of interest.

Kalathil K Sureshkumar[1], Robert Ryhal[1], Khaled Nashar[1], Reem Daloul[1]

[1]Division of Nephrology and Hypertension, Medicine Institute, Allegheny General Hospital, Pittsburgh, PA, United States

***Corresponding author:** Kalathil K Sureshkumar, Division of Nephrology and Hypertension, Medicine Institute, Allegheny General Hospital, Pittsburgh, PA, United States. E-mail: kalathil.sureshkumar@ahn.org*

References

1. Helderman JH, Goral S. Gastrointestinal complications of transplant immunosuppression. J Am Soc Nephrol 2002;13:277–87.
2. Arns W. Noninfectious gastrointestinal (GI) complications of mycophenolic acid therapy: A consequence of local GI toxicity? Transplant Proc 2007;39:88–93.
3. Qasim M, Rahman H, Ahmed R, Oellerich M, Asif AR. Mycophenolic acid mediated disruption of the intestinal epithelial tight junctions. Exp Cell Res 2014;322:277–89.
4. Davies NM, Grinyó J, Heading R, Maes B, Meier-Kriesche HU, Oellerich M. Gastrointestinal side effects of mycophenolic acid in renal transplant patients: A reappraisal. Nephrol Dial Transplant 2007;22:2440–8.

How to cite this article: Sureshkumar KK, Ryhal R, Nashar K, Daloul R. Mycophenolate-Induced Dysphagia in a Kidney Transplant Recipient. Indian J Nephrol. 2025;35:446-7. doi: 10.25259/IJN_680_2024

Received: 07-11-2024; **Accepted:** 22-11-2024; **Online First:** 26-12-2024; **Published:** 10-04-2025

DOI: 10.25259/IJN_680_2024

Evaluating the Impact of Therapeutic Anticoagulation on Acute Kidney Injury in COVID-19: Insights and Future Directions

Dear Editor,

The study by Bansal *et al.*[1] provides valuable insights into the incidence, risk factors, and outcomes of acute kidney injury (AKI) in high-risk COVID-19 patients from a tertiary care center in India. The findings highlight a significant burden of AKI, particularly among intensive care unit (ICU) patients, with 88% developing AKI. Many of these cases required kidney replacement therapy (KRT) and were associated with a high mortality rate of 74%. These results underscore the severe implications of AKI, especially in patients with comorbidities like diabetes and coronary heart disease, as well as those with elevated inflammatory markers such as C-reactive protein, ferritin, and lactate dehydrogenase.[2]

A critical limitation, however, is the absence of data on the number of patients receiving therapeutic dose anticoagulants, such as heparin. This gap limits our ability to assess whether therapeutic-dose anticoagulation could reduce AKI risk in COVID-19 patients. Given COVID-19's tendency to induce thrombotic and inflammatory complications, therapeutic-dose anticoagulants may protect the kidneys by reducing microvascular thrombosis and inflammation—key factors in AKI pathophysiology.[3] Including such data could provide valuable insights, revealing whether a significant association exists between therapeutic-dose anticoagulation and reduced AKI incidence or improved recovery outcomes. Notably, therapeutic-dose heparin has shown promise in other studies for potentially reducing AKI risk, which makes this an important area for further investigation.[4,5]

Understanding the role of therapeutic-dose anticoagulation could be transformative, potentially influencing treatment protocols to reduce AKI incidence and improve patient survival.[6] If protective effects are confirmed, therapeutic-dose anticoagulation may inform optimized care strategies, enhancing outcomes and quality of life for critically ill COVID-19 patients.

In conclusion, while this study sheds light on AKI's burden in COVID-19, addressing the missing data on therapeutic anticoagulation could unlock new avenues in AKI prevention and shape treatment strategies for critically ill patients.

Conflicts of interest: There are no conflicts of interest.

Chia Siang Kow[1], Dinesh Sangarran Ramachandram[2], Syed Shahzad Hasan[1], Kaeshaelya Thiruchelvam[3]

[1]School of Applied Sciences, University of Huddersfield, Huddersfield, United Kingdom, [2]School of Pharmacy, Monash University Malaysia, Bandar Sunway, Selangor, [3]School of Pharmacy, International Medical University, Kuala Lumpur, Malaysia

Corresponding author: *Kaeshaelya Thiruchelvam, School of Pharmacy, International Medical University, Kuala Lumpur, Malaysia. E-mail: kaeshaelya@imu.edu.my*

References

1. Bansal SB, Babras M, Rana A, Mahapatra A, Yadav DK, Sethi SK. A prospective study of incidence, risk factors, and outcomes of acute kidney injury in coronavirus disease 2019. Indian J Nephrol 2024;34:461–6.
2. Kow CS, Hasan SS. Possible protective effect of renin-angiotensin system inhibitors in COVID-19 induced acute kidney injury. J Am Soc Nephrol 2020;31:1917–8.
3. Iba T, Helms J, Maier CL, Levi M, Scarlatescu E, Levy JH. The role of thromboinflammation in acute kidney injury among patients with septic coagulopathy. J Thromb Haemost 2024;22:1530–40.
4. Smilowitz NR, Hade EM, Kornblith LZ, Castellucci LA, Cushman M, Farkouh M, *et al*. Effect of therapeutic-dose heparin on severe acute kidney injury and death in noncritically ill patients hospitalized for COVID-19: A prespecified secondary analysis of the ACTIV4a and ATTACC randomized trial. Res Pract Thromb Haemost 2023;7:102167.
5. Kow CS, Thiruchelvam K. Therapeutic-dose heparin in preventing COVID-19-associated acute kidney injury: What about bleeding risk? Res Pract Thromb Haemost 2023;7:102246.
6. Kow CS, Hasan SS. Special consideration in the dosing of medications for patients with COVID-19 and acute kidney injury. Int Braz J Urol 2021;47:690–1.

How to cite this article: Kow CS, Ramachandram DS, Hasan SS, Thiruchelvam K. Evaluating the Impact of Therapeutic Anticoagulation on Acute Kidney Injury in COVID-19: Insights and Future Directions. Indian J Nephrol. 2025;35:447-8. doi: 10.25259/IJN_716_2024

Received: 20-11-2024; **Accepted:** 26-11-2024; **Online First:** 26-12-2024; **Published:** 10-04-2025

DOI: 10.25259/IJN_716_2024