

## PEER-REVIEW REPORT

Name of journal: World Journal of Transplantation

Manuscript NO: 90277

Title: Thrombotic microangiopathy after kidney transplantation: Expanding etiologic

and pathogenetic spectra

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05262508

**Position:** Peer Reviewer

Academic degree: MD, PhD

**Professional title:** Professor

Reviewer's Country/Territory: China

Author's Country/Territory: Pakistan

Manuscript submission date: 2023-11-29

Reviewer chosen by: Jia-Ru Fan

Reviewer accepted review: 2024-01-03 13:41

Reviewer performed review: 2024-01-05 13:38

Review time: 1 Day and 23 Hours

	[Y] Grade A: Excellent [] Grade B: Very good [] Grade C:
Scientific quality	Good
	[ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[] Grade A: Excellent       [Y] Grade B: Good       [] Grade C: Fair         [] Grade D: No novelty
Creativity or innovation of this manuscript	[Y] Grade A: Excellent [] Grade B: Good [] Grade C: Fair [] Grade D: No creativity or innovation
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Scientific significance of the conclusion in this manuscript	<ul> <li>[ ] Grade A: Excellent [Y] Grade B: Good [] Grade C: Fair</li> <li>[ ] Grade D: No scientific significance</li> </ul>
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [ Y] Minor revision [ ] Major revision [ ] Rejection
Re-review	[Y]Yes []No
Peer-reviewer statements	Peer-Review: [Y] Anonymous       [] Onymous         Conflicts-of-Interest: [] Yes       [Y] No

## SPECIFIC COMMENTS TO AUTHORS

After kidney transplantation, rapamycin and CNI are commonly used to prevent rejection reactions, but there are reports in the literature that rapamycin may cause TMA. When rapamycin is used in combination with CNI, an increase in the incidence of TMA and VOD is observed. However, there are different views. Studies have shown that there is no endothelial cell damage after single-dose exposure to rapamycin. Endothelial cell damage and an increase in the incidence of TMA and VOD occur only when rapamycin is used in combination with tacrolimus. Literature reports that replacing tacrolimus with rapamycin can actually improve TMA. How does the author view and explain this issue? References (DOI: 10.1111/ctr.14180 , DOI: 10.1080/1744666X.2022.2072299 , and DOI: DOI: 10.3389/fonc.2021.683263) need to be cited.



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Title: Thrombotic microangiopathy after kidney transplantation: Expanding etiologic

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Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05247020

**Position:** Peer Reviewer

Academic degree: PhD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: Pakistan

Manuscript submission date: 2023-11-29

Reviewer chosen by: Jia-Ru Fan

Reviewer accepted review: 2024-01-04 06:16

Reviewer performed review: 2024-01-09 09:56

Review time: 5 Days and 3 Hours

	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C:
Scientific quality	Good
	[ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[] Grade A: Excellent       [Y] Grade B: Good       [] Grade C: Fair         [] Grade D: No novelty
Creativity or innovation of	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair
this manuscript	[ ] Grade D: No creativity or innovation



Scientific significance of the conclusion in this manuscript	<ul> <li>[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair</li> <li>[ ] Grade D: No scientific significance</li> </ul>
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	<ul> <li>[ ] Accept (High priority)</li> <li>[ ] Accept (General priority)</li> <li>[ Y] Minor revision</li> <li>[ ] Major revision</li> <li>[ ] Rejection</li> </ul>
Re-review	[Y]Yes []No
Peer-reviewer statements	Peer-Review: [Y] Anonymous       [] Onymous         Conflicts-of-Interest: [] Yes       [Y] No

## SPECIFIC COMMENTS TO AUTHORS

The authors submitted a manuscript discussing thrombotic microangiopathy (TMA) as a complication in kidney transplant recipients. It emphasizes the importance of early diagnosis and treatment for better outcomes. TMA is broadly categorized into hemolytic uremic syndrome (HUS) and thrombotic thrombocytopenic purpura (TTP). The article also discusses the etiology and classification of TMAs, including primary and secondary causes. Post-transplant TMA (PT-TMA) is specifically addressed, highlighting its similarities and differences with native kidney TMA. TMA is characterized by microangiopathic hemolytic anemia, thrombocytopenia and organ injury occurring due to endothelial cell damage and microthrombi formation in small vessels. Post-transplant TMA is a rare and clinically challenging finding in renal transplant biopsies. Differentiating between a primary complement-mediated process and one triggered by secondary factors is critical to initiate timely treatment but can be challenging for clinicians, especially after a kidney transplant due to presence of multiple confounding factors. Overall, the article provides a comprehensive overview of TMA after kidney transplantation. It covers the definition, classification, etiology, pathogenesis, and



histopathological features of TMA and aims to increase awareness of this under-recognized cause of kidney allograft dysfunction. There are some issues that need to be noted. 1. There is some more to the abstract section. The authors could have streamlined the content appropriately. 2. The authors should state what is new in this manuscript compared to previous reviews. 3. The authors should number the paragraphs in the manuscript in a logical relationship, which will allow the readers to better go through the structural hierarchy of the manuscript. 4. The article does not address preventive measures or strategies to minimize the risk of post-transplant TMA. This information would be valuable for clinicians and researchers in the field. 5. Very few English errors need to be corrected.