

# Examining the inconclusive link: Minimal change disease and ChAdOx1 nCoV-19 vaccination

Dear Editor,

With great interest, we have read the article by Amresh Krishna *et al.* titled “Minimal change disease (MCD) following vaccination with ChAdOx1 nCoV-19 vaccine in a young Indian male: A case report” published in your esteemed journal.<sup>[1]</sup>

Firstly, I commend the authors for shedding light on this rare occurrence of MCD following ChAdOx1 nCoV-19 vaccination. It makes a significant contribution to medical understanding of possible side effects related to COVID-19 vaccinations. However, it is necessary to take into account a number of variables and proceed with care when inferring a causal link between the vaccine and MCD from a single case report.

The case report is only the second case of nephrotic syndrome following vaccination with ChAdOx1 nCoV-19. The first was reported in a 19 year old by Anupama *et al.* in the article “Nephrotic Syndrome Following ChAdOx1 nCoV-19 Vaccine Against SARS-CoV-2”.<sup>[2]</sup> The nephrotic syndrome reported by them was a proliferative type of MCD, while the case reported by Amresh *et al.* is a plain case of MCD. The mechanism proposed by Amresh *et al.* was T-cell-mediated podocyte injury due to immune cell activation. Since the histological findings are different in both, the former is a pure case of MCD so it showed no changes on light microscopy, but the latter was a proliferative type of MCD showing mesangial proliferation on light microscopy, the reason for the same needs to be found out. In both cases, as per the treatment protocol for MCD prednisolone has been given with substantial improvement. Amresh *et al.* have ruled out other causes of MCD. The antistreptolysin O titre was in the normal range. But one cannot rule out infection.<sup>[3]</sup> Occurrence of MCD in this age group is less common and when it does occur, the severity is high compared to the typical age group of 2–6 years.<sup>[4]</sup> In adults, the risk of acute kidney injury with MCD is higher and should be anticipated so that patient can be more closely monitored to avoid such complications.<sup>[5]</sup>

Idiopathic glomerular disease classified as MCD has a number of etiological causes, such as infections, drugs, and vaccinations. It is important to distinguish between correlation and causation when examining the temporal relationship between ChAdOx1 nCoV-19 vaccination and the emergence of MCD in the described case. It becomes tough to prove a direct correlation between the vaccine and the prevalence of MCD without a bigger sample size or controlled trials.

A discussion of the current body of research on the safety profile of the ChAdOx1 nCoV-19 vaccine, highlighting the extensive monitoring systems in place for adverse events after immunisation, would be beneficial to ensure a balanced understanding of the subject. To fully assess the probable link between the vaccine and MCD, the scientific and medical communities at large would benefit from further research and more extensive investigations. This would help readers get a complete picture and prevent needless vaccine reluctance or exaggerated alarm.

Sincerely,

Anjali Srikanth Mannava

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

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**Received:** 26-05-2023

**Revised:** 28-11-2023

**Accepted:** 28-11-2023

**Published:** 04-04-2024

Access this article online	
<b>Quick Response Code:</b> 	<b>Website:</b> <a href="http://journals.lww.com/JFMPC">http://journals.lww.com/JFMPC</a>
	<b>DOI:</b> 10.4103/jfmpe.jfmpe_869_23

**How to cite this article:** Mannava AS. Examining the inconclusive link: Minimal change disease and ChAdOx1 nCoV-19 vaccination. J Family Med Prim Care 2024;13:1145-6.

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