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Letter to the Editor

LETTER TO THE EDITOR

COVID-19 vaccination in anti-neutrophil cytoplasmic antibody-associated vasculitis: lessons from influenza vaccination?

Jackie Sim[1], Tung Lin Lee[2] and Cynthia Ciwei Lim[2]

[1]Yong Loo Lin School of Medicine, National University of Singapore, Singapore and [2]Department of Renal Medicine, Singapore General Hospital, Singapore

Correspondence to: Cynthia Ciwei Lim; E-mail: cynthia.lim.c.w@singhealth.com.sg

The emergence of *de novo* and relapsing anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis (AAV) following coronavirus disease 2019 (COVID-19) vaccination [1] in the midst of an unprecedented rapid global vaccination drive against COVID-19 is reminiscent of that reported after influenza vaccination [2]. A recent pharmacoepidemiological study of drug-associated AAV reported in the World Health Organization pharmacovigilance database between 2006 and 2020 found that influenza vaccination was one of the 15 drugs with disproportionate reporting for AAV [2].

However, earlier studies had noted that among prevalent AAV, disease activity scores did not change significantly after influenza vaccination, and flares temporally related to vaccination were infrequent [3]. A systematic review (PROSPERO registration number CRD42020181315) of the Cochrane Central Register of Controlled Trials, PubMed, Embase, the World Health Organization International Clinical Trials Registry Platform and ClinicalTrials.gov up to 25 December 2021 noted that influenza vaccination safety was reported by five studies (422 patients) and was generally safe in AAV (Table 1) [4–8]. Conversely, influenza infection risk, morbidity and mortality are significantly amplified in autoimmune disease and immunosuppression [9], thus lending support for influenza vaccination in prevalent AAV and other autoimmune conditions [3].

Table 1. Studies evaluating safety of influenza vaccine in ANCA-associated vasculitis

Study	Study design	Participants[a]	Follow-up, months	Safety outcomes		
				Relapse, *n* (%)	Disease activity	ANCA titer
Holvast *et al.* 2009 [4]	RCT	49	1	1 (2.0)	NSC	NSC
			3–4	0	NSC	NSC
Jeffs *et al.* 2015 [5]	RCT	24	1	0	NSC	NSC
			6	1 (4.2)	NSC	NSC
Saad *et al.* 2011 [6]	PC	26	0.75	NR	NR	NR
Stassen *et al.* 2008 [7]	RC	156	12	3.4[b]	NR	NR
Zycinska *et al.* 2007 [8]	PC	35	1	0	NR	NR

[a]Participants who received influenza vaccination.
[b]Per 100 patients at risk.
ANCA, anti-neutrophil cytoplasmic antibody; RCT, randomized controlled trial; NR, not reported; NSC, not significantly changed; PC, prospective cohort; RC, retrospective cohort.

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Since COVID-19 vaccine trial safety data in AAV are lacking as most trials have excluded immunosuppressed patients, a future pharmacoepidemiological study that includes emerging data such as that reported by Fillon *et al.* [1] may provide insights into the role of COVID-19 vaccines in *de novo* and relapsing AAV. In the meantime, the benefit of vaccinations for preventable infections such as influenza and COVID-19 with elevated infection-related mortality in immunosuppression likely outweighs the possibility of a disease flare. Increased physician and patient awareness and surveillance postvaccination may be considered in patients with immune-mediated kidney disease, including AAV [10].

CONFLICT OF INTEREST STATEMENT

This article has not been published previously in whole or part. All authors declare no potential conflict of interest.

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