

Letter to the Editor Regarding: What Triggers Takotsubo After a SARS-CoV-2 Vaccination? Heart Lung Circ. 2021;30(12):e119–20



Keywords

SARS-CoV-2 • COVID-19 • Vaccination • Takotsubo • Side effect

To the Editor,

We read with interest the case report by Boscolo Berto et al. about a 63-year-old female who developed the classical type of Takotsubo cardiomyopathy (TTS) one day after her first jab of the Moderna vaccine [1]. The patient completely recovered without any treatment [1]. The study is appealing but raises several comments and concerns.

We do not agree with the statement that the index case represents the first case with SARS-CoV-2 vaccination-induced TTS [1]. SARS-CoV-2 vaccination-induced TTS has previously been reported in at least four other cases (Table 1) [2–5].

Since SARS-CoV-2 vaccinations of any brand are not free of side effects [6], it would be interesting to know if the index patient reported any complaints in addition to fever and dyspnoea. Since headache is the most frequent neurological side effect and since headache can trigger TTS, we would like to know if the patient complained of a headache. Since the

third most frequent neurological side effect of SARS-CoV-2 vaccinations is venous sinus thrombosis (VST), and VST is compulsorily associated with headache, we would like to know if there were any indications for VST. Since Guillain Barre syndrome (GBS) is the second most frequent neurological side effect of SARS-CoV-2 vaccinations [6], and GBS can go along with dysautonomia either in association with motor or sensory deficits or without, we would like to know if pure dysautonomic GBS was appropriately excluded. The authors themselves consider a sympatho-vagal imbalance towards adrenergic predominance as a possible pathophysiological mechanism. Since TTS is triggered by emotional or physical stress in one third each, we would like to know if any potential emotional or physical trigger was excluded; even fear from the vaccination can trigger TTS [7].

Overall, this interesting report had some limitations, which challenge the results and their interpretation. Before

Table 1 SARS-CoV-2 vaccination triggered TTS reported as per the end of November 2021.

Age	Sex	Brand	LAOT	TTS Type	Treatment	Outcome	Reference
63	F	1. Moderna	1 d	Classical	None	nr	[1]
72	M	1. AZV	4 d	Classical	Dual APT	CR	[2]
65	F	1. Moderna	2 d	Classical	Aspirin, atorvastatin, lisinopril, metoprolol	IR	[3]
80	F	1. Pfizer	4 d	Classical	None	IR	[4]
73	F	1. Moderna	nr	Classical	Metoprolol, losartan	IR	[5]

Abbreviations: APT, antiplatelet therapy; AZV, Astra Zeneca vaccine; CR, complete recovery; IR, incomplete recovery at last follow-up; LAOT, latency between vaccination and onset of TTS; nr, not reported.

attributing TTS after a SARS-CoV-2 vaccination to the stress from the vaccination, several differential triggers of TSS should be considered.

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None.

Statement of Ethics

In accordance if ethical guidelines.

Conflicts of Interest

None.

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Author Contribution

JF: design, literature search, discussion, first draft, critical comments, final approval; TA: literature search, discussion, critical comments, final approval.

Informed Consent

Not applicable.

The study was approved by the institutional review board.

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