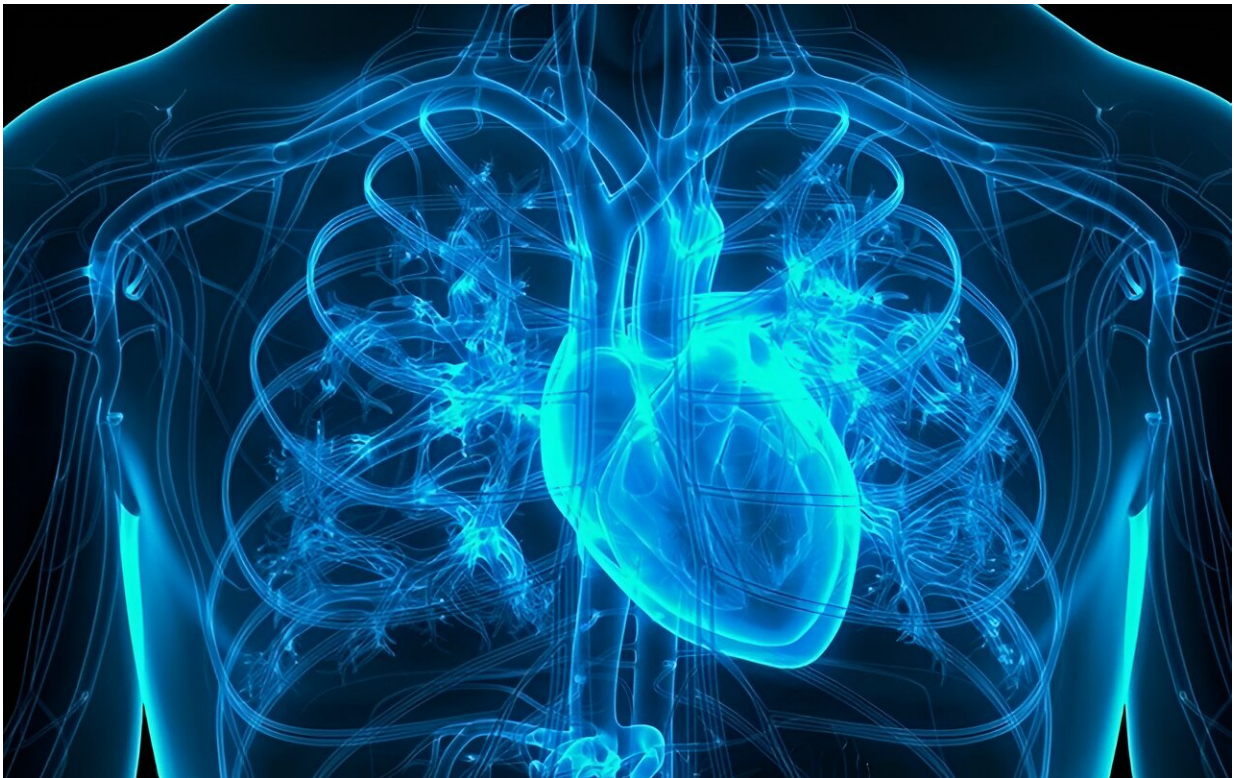


Preexisting conditions seen in all patients with tachycardia after COVID-19 vaccine

January 10 2024, by Elana Gotkine



Patients with post-COVID-19 vaccination postural orthostatic tachycardia syndrome (POTS) all have preexisting conditions, according to a study published in the January issue of *Heart Rhythm*.

Debbie Lin Teodorescu, M.D., from the Cedars-Sinai Medical Center in Los Angeles, and colleagues prospectively collected data from 10 patients in a POTS clinic between July 2021 and June 2022 reporting new or exacerbated POTS symptoms after COVID-19 vaccination. Heart rate variability (HRV) and skin [sympathetic nerve activity](#) (SKNA) were compared between the patients and 24 healthy controls.

Conditions that could increase the risk for POTS were seen in all patients, including previous COVID-19 infection, hypermobile Ehlers-Danlos syndrome, mast cell activation syndrome, and autoimmune, cardiac, neurological, or gastrointestinal [conditions](#). The researchers found that compared with controls, a lower ambulatory root mean square of successive differences was seen in HRV for patients (46.19 ± 24 versus 72.49 ± 40.8 ms).

Reduced mean amplitude was seen in SKNA for patients versus controls (0.97 ± 0.052 versus 1.2 ± 0.31 μ V); burst amplitude was also reduced (1.67 ± 0.16 versus 4.3 ± 4.3 μ V). All patients reported improvement with the usual POTS care after 417.2 ± 131.4 days of follow-up; relapses of POTS symptoms were reported in two with COVID-19 reinfection and one with small fiber neuropathy.

"These findings suggest it may be helpful to keep an eye on [patients](#) with underlying [health issues](#) after COVID-19 vaccination to monitor for postvaccine POTS," coauthor Peng-Sheng Chen, M.D., also from the Cedars Sinai Medical Center, said in a statement.

More information: Debbie Lin Teodorescu et al, Postural orthostatic tachycardia syndrome after COVID-19 vaccination, *Heart Rhythm* (2023). [DOI: 10.1016/j.hrthm.2023.09.012](https://doi.org/10.1016/j.hrthm.2023.09.012)

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Citation: Preexisting conditions seen in all patients with tachycardia after COVID-19 vaccine (2024, January 10) retrieved 10 May 2024 from <https://medicalxpress.com/news/2024-01-preexisting-conditions-patients-tachycardia-covid.html>

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