



Supporting Information

Supplementary results

This appendix was part of the submitted manuscript and has been peer reviewed. It is posted as supplied by the authors.

Appendix to: Smith J, Schrader S, Morgan H, et al. Clinical phenotype of COVID-19 vaccine-associated myocarditis in Victoria, 2021–22: a cross-sectional study. *Med J Aust* 2025; doi: 10.5694/mja2.52557.

Table 1. Symptoms at presentation by people with confirmed COVID-19 vaccine-associated myocarditis, Victoria, 22 February 2021 – 30 September 2022, by sex and broad age group

	Sex		Age group	
	Male	Female	24 years or younger	Over 24 years
<i>Chest pain</i>	154 (99%)	50 (98%)	129 (100%)	75 (97%)
<i>Palpitations</i>	40 (26%)	28 (55%)	33 (26%)	35 (46%)
<i>Dyspnoea</i>	58 (37%)	19 (37%)	48 (37%)	29 (38%)
<i>Diaphoresis</i>	20 (13%)	8 (16%)	10 (8%)	18 (23%)
<i>Nausea</i>	13 (8%)	10 (20%)	13 (10%)	10 (13%)

Table 2. Time to symptom onset, onset symptoms, and cardiac investigations for people with of confirmed COVID-19 vaccine-associated myocarditis, Victoria, 22 February 2021 – 30 September 2022: regression analyses by broad age group, sex, and troponin level increase

Characteristic	Regression including covariates age and sex	Regression including interaction age*sex	Interaction term: > 24 years*male
	Adjusted odds ratio or coefficient* (95% CI)	Adjusted odds ratio or coefficient* (95% CI)	P
Time to symptom onset			
Age group (> 24 years v ≤ 24 years)	1.31 (0.41–2.21)	1.03 (–0.71 to 2.76)	0.70
Sex (male v female patients)	0.24 (–0.77 to 1.25)	0.06 (–1.29 to 1.42)	0.70
Troponin level increase (per one-fold increase)	–0.0002 (–0.0007 to 0.0002)	–0.0002 (0.0007 to 0.0002)	0.60
Troponin level increase (≤ 5-fold v > 5-fold)	–0.09 (–0.11 to 0.93)	–0.08 (–1.1 to 0.95)	0.67
Symptoms at hospital presentation†			
Chest pain			
Age group (> 24 years v ≤ 24 years)	0.98 (0.95–1.003)	0.96 (0.91–1.01)	0.52
Sex (male v female patients)	1.01 (0.98–1.04)	1.00 (0.96–1.04)	0.52
Palpitations			
Age group (> 24 years v ≤ 24 years)	1.18 (1.04–1.34)	1.29 (1.01–1.66)	0.40
Sex (male v female patients)	0.77 (0.66–0.89)	0.81 (0.67–0.98)	0.40
Dyspnoea			
Age group (> 24 years v ≤ 24 years)	1.005 (0.87–1.15)	0.98 (0.75–1.28)	0.8
Sex (male v female patients)	1.002 (0.86–1.17)	0.98 (0.80–1.21)	0.8
Diaphoresis			
Age group (> 24 years v ≤ 24 years)	1.19 (1.08–1.31)	1.32 (1.09–1.61)	0.21
Sex (male v female patients)	1.01 (0.90–1.13)	1.08 (0.93–1.26)	0.21
Cardiac investigations			
Troponin level increase			
Age group (> 24 years v ≤ 24 years)	–82.8 (–368 to 203)	–347 (–894 to 200)	0.27
Sex (male v female patients)	84.9 (–234 to 404)	–77.2 (–506 to 351)	0.27
Troponin fold increase (5-fold)			
Age group (> 24 years v ≤ 24 years)	0.82 (0.72–0.92)	0.88 (0.69–1.11)	0.49
Sex (male v female patients)	1.02 (0.89–1.72)	1.07 (0.89–1.28)	0.49
Abnormal electrocardiogram			
Age group (> 24 years v ≤ 24 years)	1.07 (0.93–1.24)	1.07 (0.81–1.41)	0.97
Sex (male v female patients)	0.75 (0.64–0.89)	0.75 (0.60–0.94)	0.97
Abnormal echocardiogram			
Age group (> 24 years v ≤ 24 years)	0.98 (0.87–1.11)	0.96 (0.76–1.21)	0.82
Sex (male v female patients)	0.91 (0.80–1.04)	0.90 (0.75–1.08)	0.82
Abnormal cMRI			
Age group (> 24 years v ≤ 24 years)	0.86 (0.72–1.04)	0.88 (0.6–1.27)	0.82
Sex (male v female patients)	1.15 (0.98–1.43)	0.90 (0.75–1.08)	0.94
Abnormal echocardiography result	1.13 (0.90–1.43)	1.13 (0.89–1.43)	0.86

aOR = adjusted odds ratio; CI = confidence interval; cMRI = cardiac magnetic resonance imaging.

* Time to symptom onset and troponin level increase as abnormal cardiac investigation result: linear regression (coefficient with 95% CI); symptoms at presentation and abnormal cardiac investigation results other than troponin level: logistic regression (adjusted odds ratio with 95% CIs). Bold: statistically significant (linear regression: 95% CI does not include 1; logistic regression: 95% CI does not include 0).

† Emergency department, ward, or intensive care unit.

Table 3. Abnormal cardiac investigation results in people with of confirmed COVID-19 vaccine-associated myocarditis, Victoria, 22 February 2021 – 30 September 2022, by result type

Abnormality	Number
Electrocardiogram	104
ST elevation	75 (75%)
ST segment depression	22 (21%)
PR depression	22 (21%)
AV node conduction delay	8 (8%)
Other	5 (5%)
Echocardiogram	26
Systolic dysfunction	11 (42%)
Wall motion abnormalities	9 (35%)
Ventricular dilation	9 (35%)
Pericardial effusion	7 (27%)
Left ventricular strain	2 (8%)
Other	3 (12%)
Cardiac MRI	54
Late gadolinium enhancement	50 (93%)
Oedema	23 (43%)
Abnormal T2 signal	15 (28%)
Pericardial effusion	11 (20%)
Pericarditis	6 (11%)
Fibrosis	5 (9%)
Left ventricular dysfunction	2 (4%)
Abnormal T1 signal	2 (4%)