

Supplemental Material

Data S1.

Supplemental Methods

SCAD-induced PTSD

SCAD-induced PTSD symptoms were assessed with the PTSD Checklist for the *Diagnostic and Statistical Manual of Mental Disorder*, fifth edition (*DSM-5*), a 20-item self-report measure that queries the *DSM-5* symptoms of PTSD.¹⁷ This measure has good reliability and validity and can be used for identifying probable PTSD diagnoses.^{18,19} Patients identified their worst or most distressing SCAD event and answered questions with respect to that experience. For each symptom, patients indicated whether they ever experienced the symptom in response to their worst/most distressing SCAD event; if so, they then indicated the extent to which they were bothered by the symptom in the past month on a 5-point scale (0=“Not at all” to 4=“Extremely”).

Following prior research,¹⁶ responses were aggregated to reflect probable lifetime and past-month diagnoses of PTSD according to *DSM-5* criteria. Probable lifetime PTSD diagnosis required the presence of at least one Criterion B (re-experiencing) symptom, at least one Criterion C (avoidance) symptom, at least two Criterion D (negative alterations in cognition and mood) symptoms, and at least two Criterion E (arousal/reactivity) symptoms. Probable past-month PTSD diagnosis required the same combination of symptoms as for lifetime but symptoms had to be endorsed at “Moderately” or greater (2+ on the 0-4 scale). Information about lifetime and past-month SCAD-induced PTSD was combined to classify patients as having: 1)

no lifetime PTSD symptoms, 2) some lifetime PTSD symptoms but no probable diagnosis, 3) probable lifetime (but not past-month) PTSD, and 4) probable past-month PTSD (note, these individuals would also meet criteria for lifetime PTSD). In addition, past-month PTSD symptom severity was calculated by summing the responses to the 20 past-month symptom questions (range=0-80, Cronbach's alpha=.90).

Past-week Sleep Disturbance

Patients described past-week sleep disturbance using the Patient-Reported Outcomes Measurement Information System (PROMIS) Sleep Disturbance Scale, Short Form 6a;²⁰ short forms based on the PROMIS sleep disturbance item banks have been found to have excellent reliability and validity.^{20,21} Sleep quality was rated on a 5-point scale (1="Very good" to 5="Very poor"), and five items assessed qualitative aspects of sleep (e.g., "I had difficulty falling asleep), also on a 5-point scale (1="Not at all" to 5="Very much"). Total raw scores (range=6-30; Cronbach's alpha=.93) were converted to T-scores using the PROMIS Sleep Scoring Manual.²² Higher scores reflect greater sleep disturbance; a T-score of 50 corresponds to the average for the United States general population and 10 is the standard deviation of the population

Past-month Disease-specific Health Status

Patients provided information on overall disease-specific health status in the past month using the Seattle Angina Questionnaire-7, a 7-item disease-specific patient health status measure with good psychometric properties.²³ Items assessed symptoms due to chest pain/tightness/angina, functioning, and quality of life. A total score (range=0-100, Cronbach's alpha=.81) reflects overall disease-specific health status in the past month, with 0 indicating the worst possible health and 100 reflecting the best possible health.

Table S1. Comparison of patient characteristics for iSCAD Registry patients who completed the PTSD assessment with the full registry cohort.

| Patient Characteristics | Completed PTSD Assessment (<i>n</i> =859) | Valid <i>n</i> | Full Registry Cohort (<i>N</i> =1,156) | Valid <i>n</i> |
|---|---|----------------|--|----------------|
| <i>Demographics</i> | | | | |
| Age at enrollment, years, <i>M</i> (<i>SD</i>) | 52.3 (10.5) | 774 | 51.7 (10.5) | 1,011 |
| Sex, <i>n</i> (%) | | 858 | | 916 |
| Woman | 806 (93.9%) | | 861 (94.0%) | |
| Man | 52 (6.1%) | | 54 (5.9%) | |
| Prefer not to say | 0 (0.0%) | | 1 (0.1%) | |
| Race, <i>n</i> (%) | | 827 | | 884 |
| American Indian/Alaska Native | 3 (0.4%) | | 5 (0.6%) | |
| Asian | 15 (1.8%) | | 17 (1.9%) | |
| Black/African American | 60 (7.3%) | | 70 (7.9%) | |
| Native Hawaiian/Pacific Islander | 1 (0.1%) | | 1 (0.1%) | |
| White | 736 (89.0%) | | 778 (88.0%) | |
| Multiracial | 8 (1.0%) | | 9 (1.0%) | |
| Other | 4 (0.5%) | | 4 (0.5%) | |
| Hispanic/Latino ethnicity, <i>n</i> (%) | 40 (4.7%) | 859 | 42 (3.6%) | 1,156 |
| Marital status, <i>n</i> (%) | | 859 | | 918 |
| Single | 82 (9.5%) | | 91 (9.9%) | |
| Married/domestic partner | 677 (78.8%) | | 718 (78.2%) | |
| Divorced | 76 (8.8%) | | 83 (9.0%) | |
| Widowed | 21 (2.4%) | | 21 (2.3%) | |
| Prefer not to say | 3 (0.3%) | | 5 (0.5%) | |
| Education, <i>n</i> (%) | | 859 | | 918 |
| Some high school | 5 (0.6%) | | 5 (0.5%) | |
| High school graduate | 58 (6.8%) | | 63 (6.9%) | |
| Some college | 125 (14.6%) | | 142 (15.5%) | |
| College graduate | 359 (41.8%) | | 381 (41.5%) | |
| Trade school/apprenticeship | 28 (3.3%) | | 31 (3.4%) | |
| Advanced/professional degree | 281 (32.7%) | | 292 (31.8%) | |
| Not sure or prefer not to say | 3 (0.3%) | | 4 (0.4%) | |
| Current employment status, <i>n</i> (%) | | 859 | | 917 |
| Not employed outside home | 107 (12.5%) | | 114 (12.4%) | |
| Retired | 110 (12.8%) | | 114 (12.4%) | |
| Student | 5 (0.6%) | | 5 (0.5%) | |
| Unemployed | 56 (6.5%) | | 58 (6.3%) | |
| Working part-time | 118 (13.7%) | | 130 (14.2%) | |
| Working full-time | 435 (50.6%) | | 466 (50.8%) | |
| Not sure or prefer not to say | 28 (3.3%) | | 30 (3.3%) | |
| <i>SCAD History</i> | | | | |
| Age at first SCAD, years, <i>M</i> (<i>SD</i>) | 49.7 (10.6) | 849 | 49.7 (10.6) | 885 |
| History of pregnancy-related SCAD for those with at least 1 pregnancy, <i>n</i> (%) | 82/645 (12.7%) | 645 | 85/666 (12.8%) | 666 |

| | | | | |
|---|-------------|-----|-------------|-------|
| Acute emotional stress/anxiety before SCAD, <i>n</i> (%) [*] | 110 (12.8%) | 859 | 113 (9.8%) | 1,156 |
| Cardiac arrest presentation, <i>n</i> (%) [†] | 39 (4.5%) | 859 | 47 (4.1%) | 1,156 |
| Cardiogenic shock presentation, <i>n</i> (%) [†] | 3 (0.3%) | 859 | 3 (0.3%) | 1,156 |
| NSTEMI presentation, <i>n</i> (%) [†] | 416 (48.4%) | 859 | 550 (47.6%) | 1,156 |
| STEMI presentation, <i>n</i> (%) [†] | 218 (25.4%) | 859 | 281 (24.3%) | 1,156 |
| Other presentation, <i>n</i> (%) ^{†‡} | 318 (37.0%) | 859 | 419 (36.2%) | 1,156 |
| CABG performed, <i>n</i> (%) [†] | 28 (3.7%) | 765 | 33 (3.3%) | 1,000 |
| PCI performed, <i>n</i> (%) [†] | 184 (24.1%) | 763 | 241 (24.1%) | 1,000 |
| Medical therapy only, <i>n</i> (%) [†] | 560 (73.6%) | 761 | 736 (73.7%) | 998 |
| <i>Prior Mental Health</i> | | | | |
| History of depression, <i>n</i> (%) [*] | 197 (22.9%) | 859 | 206 (17.8%) | 1,156 |
| History of anxiety, <i>n</i> (%) [*] | 267 (31.1%) | 859 | 278 (24.0%) | 1,156 |

CABG=coronary artery bypass graft; M=mean; NSTEMI=non-ST segment elevation myocardial infarction; PCI=percutaneous coronary intervention; PTSD=posttraumatic stress disorder; SCAD=spontaneous coronary artery dissection; SD=standard deviation; STEMI=ST segment elevation myocardial infarction.

^{*}For most recent SCAD event

[†]Investigators could select as many options as applied to the most recent SCAD event; thus, percentages total to greater than 100%

[‡]Other presentations included asymptomatic, atypical chest pain, stable angina, and unstable angina