Prevalence and Predictors of Posttraumatic Stress Following Transient Ischemic Attack

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Objective

- Transient ischemic attack (TIA) increases the risk for posttraumatic stress disorder (PTSD) [1].
- Predictors of posttraumatic stress following TIA are largely unknown.
- We investigated prevalence and predictors of posttraumatic stress during the hyperacute phase and after three months in TIA patients with special emphasis on psychosocial resilience factors.

Methods

- Longitudinal observational cohort study
- Consecutive TIA patients admitted to the Stroke Unit, Department of Neurology, University of Heidelberg, 05/2016 – 06/2017
- T₁ = hyperacute phase, during stay on stroke unit
T₂ = 3 months after TIA

	T ₁	T ₂
Age	Psychiatric history yes/no	Posttraumatic stress (PDS)
Sex	Posttraumatic stress (PDS)	Depression (PHQ-9)
pmRS score	Depression (PHQ-9)	Anxiety (GAD-7)
History of cerebral ischemia	Anxiety (GAD-7)	Peritraumatic dissociation (PDEQ)
Common cerebrovascular risk factors	Peritraumatic dissociation (PDEQ)	Social support (F-SOZU-K14)
Atrial fibrillation	Social support (F-SOZU-K14)	Sense of Coherence (SOC-29)
ABCD2 score	Sense of Coherence (SOC-29)	Mindfulness (MAAS)
Imaging results	Mindfulness (MAAS)	Attachment Style (ECR-RD)

Results

Patient characteristics

Differences between PTSD+ and PTSD- patients

	Cohort T ₁ (n=73)	Cohort T ₂ (n=61)	PTSD- T ₂ (n=46)	PTSD+ T ₂ (n=15)	Test PTSD+ vs. PTSD-
Age, median (IQR)	69.0 (58.0-76.5)	70.0 (58.0-77.5)	73.0	55.0	p<0.001
Male sex, %	63.0	62.3	60.9	66.7	p=0.687
pmRS, median (IQR)	0.0 (0.0-1.0)	0.0 (0.0-1.0)	0.0 (0.0-1.0)	0.0 (0.0-1.0)	p=0.138
History of cerebrovascular ischemia, %	34.2	32.8	30.4	40.0	p=0.493
Atrial fibrillation, %	19.2	18.0	23.9	0.0	p=0.036
ABCD2 score, median (IQR)	4.0 (3.0-5.0)	4.0 (3.0-5.0)	4.0 (4.0-5.0)	3.0 (2.0-4.0)	p=0.012
History of psych. disorder, %	12.5	9.8	4.3	26.7	p=0.012
Peritraumatic dissociation, median (IQR)	1.4 (1.1-2.0)	1.4 (1.1-2.0)	1.2 (1.0-1.8)	2.0 (1.4-3.3)	p=0.003
Social support, median (IQR)	4.4 (4.0-4.8)	4.4 (4.0-4.8)	4.4 (4.0-4.8)	4.4 (4.1-4.9)	p=0.808
Sense of Coherence, median (IQR)	151 (134-167)	152 (136-167)	155 (144-172)	137 (132-149)	p=0.002
Mindfulness, median (IQR)	4.2 (3.8-4.6)	4.2 (3.8-4.6)	4.2 (3.9-4.8)	4.2 (3.2-4.4)	p=0.115
Attachment anxiety, median (IQR)	2.1 (1.5-3.1)	2.0 (1.5-2.6)	2.0 (1.5-2.6)	2.1 (1.4-2.6)	p=0.744
Attachment avoidance, median (IQR)	2.1 (1.4-2.8)	2.1 (1.4-2.4)	2.1 (1.4-2.4)	1.9 (1.4-2.4)	p=0.828

Posttraumatic stress, anxiety and depression at T₁(□) and T₂(■)

Independent longitudinal predictors of posttraumatic stress severity

	β	95% CI	p
Age	-.068	-0.275; 0.136	0.506
Sex	-.097	-0.282; 0.088	0.299
Psychiatric history	.234	0.036; 0.432	0.022
Peritraumatic dissociation	.298	0.097; 0.499	0.004
Social support	-.048	-0.246; 0.150	0.629
Sense of Coherence	-.475	-0.691; -0.260	<0.001

Multiple linear regression model: dependent variable posttraumatic stress severity score at T₂ (PDS). Independent variables at T₁. R²=.560

Standardized effect sizes β and standardized confidence intervals.

Conclusions

- Posttraumatic stress is common after TIA.
- Young patients and patients with a low risk for future stroke suffered more often from posttraumatic stress in our cohort.
- Psychiatric history, peritraumatic dissociation and Sense of Coherence were independent predictors of posttraumatic stress severity.
- Interventions to prevent PTSD after TIA should be further explored.