Supplementary material

Supplementary Table 1. Summary of characteristics and potential biases of studies selected for meta-analysis

CACAO et al. 2016		
Methods	Retrospective study.	
Participants	All patients seen at the clinic meeting ICHD-3beta criteria for SUNCT: 15 patients identified.	
Interventions	All the treatments administered to SUNCT patients at the headache clinic: surgical treatment of two symptomatic cases; lamotrigine in monotherapy from 75 to 150 mg/day; failure to lamotrigine resulted in administering one or more of the following: topiramate, carbamazepine, oxcarbazepine, gabapentin, verapamil, eslicarbazepine, indomethacin and/or corticosteroids.	
Outcomes	Responders: no strict definition of responders provided in paper.	
Risk of bias		
Domain	**Risk**	**Reason**
Pre-intervention confounding	'low'	No known confounding factors reported.
Pre-intervention selection bias	'low'	All SUNCT patients seen at the clinic in a defined time window included.
Bias in classification of intervention	'low'	Interventions likely not misclassified as they were identified from patient records.
Bias due to deviation from intended interventions	N/A	No comparator group.
Bias due to missing data	'moderate'	No missing data for lamotrigine responders. Missing data for all other interventions.
Bias in measurement of outcome	'moderate'	Outcome assessors were aware of intervention and retrospective review of outcome could have influenced the measure.
Bias in selection of the reported result	'serious'	Only the lamotrigine outcome was reported, likely influenced by the fact that this is the preferred treatment.
D'ANDREA et al. 2001		
Methods	Case series.	
Participants	Five patients diagnosed with SUNCT.	
Interventions	Lamotrigine given as monotherapy. Starting with 25 mg titrated up to a dose of 125-200 mg daily.	
Outcomes	Qualitative and quantitative (percentage reduction) description of change in attack frequency.	
Risk of bias		
Category	**Risk**	**Reason**
Pre-intervention confounding	'no information'	Too limited information provided in paper to determine possible confounders.
Pre-intervention selection bias	'moderate'	Five consecutive patients seem to have been treated with lamotrigine, though this is not clearly described. Uncertain if other patients are not reported.
Bias in classification of intervention	'low'	Interventions likely not misclassified as they were administered prospectively.

Bias due to deviation from intended interventions	N/A	No comparator group.
Bias due to missing data	'low'	Outcome data available for all patients.
Bias in measurement of outcome	'moderate'	A percentage change in headache frequency is provided, but there is no description of how this change was ascertained.
Bias in selection of the reported result	'moderate'	Sparse reporting of outcomes.
ETEMADIFAR et al. 2008		
Methods	Prospective 'before-after' trial.	
Participants	Eight patients diagnosed with SUNCT according to ICHD-2. Recruited form University Hospital headache clinic in Isfahan, Iran.	
Interventions	Gabapentin 600 to 900 mg/day.	
Outcomes	Frequency, intensity and duration of headache attacks. Side-effects.	
Risk of bias		
Category	**Risk**	**Reason**
Pre-intervention confounding	'moderate'	Failure to a series of treatments used as inclusion criterion, and prophylactic headache treatment used as exclusion criterion.
Pre-intervention selection bias	'moderate'	Unclear how patients were selected from the population.
Bias in classification of intervention	'low'	Interventions likely not misclassified as they were administered prospectively.
Bias due to deviation from intended interventions	N/A	No comparator group.
Bias due to missing data	'low'	Outcome data available for all patients.
Bias in measurement of outcome	'low'	Outcome prospectively captured in headache diary.
Bias in selection of the reported result	'low'	All prespecified outcomes reported.
WENG et al. 2017		
Methods	Retrospective audit of patients attending three different clinical sites: National Hospital for Neurology and Neurosurgery (NHNN), London, UK, between 2002 and 2007; the Headache Center, University of California, San Francisco (UCSF), San Francisco, CA, USA, from 2007 to 2013; King's College Hospital, London, UK from 2013 to 2015.	
Participants	65 SUNCT and 37 SUNA patients diagnosed according to ICHD2 or ICHD-3beta	
Interventions	All treatments used for SUNCT and SUNA at the headache clinic including: sumatriptan, oxygen, indomethacin, lidocaine, dihydroergotamine, corticosteroids, greater occipital nerve blockades, lamotrigine, topiramate, gabapentin, carbamazepine, oxcarbazepine, pregabalin, verapamil, valproate, betablockers and tricyclic antidepressants.	
Outcomes	Clinical effect defined as patients subjective report of their effect, and record in journal documentation.	
Risk of bias		
Category	**Risk**	**Reason**
Pre-intervention confounding	'low'	No known confounding factors reported.

Pre-intervention selection bias	'moderate'	Appears to be all SUNCT and SUNA patients seen at the clinic in a defined time window included, but this is not stated explicitly.
Bias in classification of intervention	'low'	Interventions likely not misclassified as they were identified from patient records.
Bias due to deviation from intended interventions	N/A	No comparator group.
Bias due to missing data	'low'	Clinical effect of all used interventions reported. No mention of missing data in paper.
Bias in measurement of outcome	'moderate'	Outcome assessors were aware of intervention and retrospective review of outcome could have influenced the measure. Patients subjective report of clinical effect was used.
Bias in selection of the reported result	'low'	Outcomes of all interventions reported.
WILLIAMS and BROADLEY. 2008		
Methods	Prospective study.	
Participants	24 cases of SUNCT and/or SUNA diagnosed according to IHS criteria.	
Interventions	Lamotrigine in a dose of 25 to 600 mg/day as prophylactic medication. Hospitalization and lignocaine infusion if symptoms were affecting daily activities to a very severe degree.	
Outcomes	Response to medication defined by percentage reduction in headache frequency and/or severity.	
Risk of bias		
Category	**Risk**	**Reason**
Pre-intervention confounding	'low'	No known confounding factors reported.
Pre-intervention selection bias	'low'	All SUNCT patients seen at the clinic in a defined time window included.
Bias in classification of intervention	'low'	Interventions likely not misclassified as they were administered prospectively.
Bias due to deviation from intended interventions	N/A	No comparator group.
Bias due to missing data	'low'	No missing data.
Bias in measurement of outcome	'moderate'	Outcome assessors were aware of intervention and retrospective review of outcome could have influenced the measure.
Bias in selection of the reported result	'moderate'	Prespecified outcomes reported. In addition, outcomes of several other interventions that were not prespecified in methods were reported.