

# Vidian neurectomy for management of chronic cluster headache

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		<input type="checkbox"/> Protocol
<b>Registration date</b> 23/05/2017	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
<b>Last Edited</b> 23/05/2017	<b>Condition category</b> Nervous System Diseases	<input type="checkbox"/> Individual participant data
		<input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Cluster headaches are a type of headache which involves excruciating attacks of pain on one side of the head. They can affect people of any age, but tend to be more common in men and people over the age of 20. Attacks can be described as stabbing and of the most severe intensity "like a knife penetrating behind the eye". Cluster headaches can be difficult to treat with 15-20% of patients not responding to drug treatment. The severity of pain and the frequency of attacks seriously degrade patients' quality of life, justifying the consideration of other, more drastic therapies. Trans-nasal endoscopic vidian neurectomy is a surgical technique is a surgical technique which involves severing or removing the vidian nerve (a nerve in the head). The aim of this study is to find out whether this procedure is an effective treatment for long-term (chronic) cluster headaches.

### Who can participate?

Adults who have been suffering from daily cluster headaches for three years.

### What does the study involve?

All participants undergo a trans-nasal endoscopic vidian neurectomy while under general anesthesia (put to sleep). After this procedure, most patients can leave the hospital at the same day and without other discomforts except a feeling of fullness in the nose. At the start of the study and then one week and one, three and six months after the surgery, patients are interviewed and complete a questionnaire to find out if their symptoms have improved.

### What are the possible benefits and risks of participating?

Participants may benefit from an improvement to their cluster headache symptoms. There is a risk of developing dry eyes, a dry nose or numbness in the palate (roof of the mouth).

### Where is the study run from?

Taipei Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation (Taiwan)

### When is the study starting and how long is it expected to run for?

August 2011 to December 2016

Who is funding the study?  
Investigator initiated and funded (Taiwan)

Who is the main contact?  
Dr Shao-Cheng Liu  
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## Contact information

**Type(s)**  
Scientific

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## Additional identifiers

**Protocol serial number**  
20170425-VN

## Study information

**Scientific Title**  
Surgical role of vidian neurectomy in treating chronic cluster headache

**Study objectives**  
Precise vidian neurectomy (VN) with maximal preservation of SPG activity is both effective and safe in patients with chronic cluster headache with failed pharmacological management.

**Ethics approval required**  
Old ethics approval format

**Ethics approval(s)**  
Institutional Review Board of Buddhist Tzu Chi General Hospital-Taipei Branch

**Study design**

Single-centre non randomised interventional study

## **Primary study design**

Interventional

## **Study type(s)**

Treatment

## **Health condition(s) or problem(s) studied**

Chronic cluster headache

## **Interventions**

All participants undergo a trans-nasal endoscopic vidian neurectomy with maximal preservation of sphenopalatine ganglion activity. This involves precisely nerve transect via an endoscopic trans-nasal approach and no cauterization was used over the distal stump of the vidian nerve to avoid thermal injury of sphenopalatine ganglion.

At baseline, one week, and one, three, six and twelve months post procedure, participants undergo a range of assessments to measure the change of their headache pattern, including mean attack frequency, mean attack intensity, and pain disability index, by patient interviews and medical tests.

## **Intervention Type**

### **Primary outcome(s)**

Headache pattern is measured by patient interviews, to obtain the change of the mean attack frequency (numbers of attacks per week) and mean attack intensity (using the visual analogue scale (VAS)) at baseline, one week, and one, three, six and twelve months post procedure.

### **Key secondary outcome(s)**

The degree participants' daily lives disrupted by cluster headache is obtained by patient interviews and questionnaire: the pain disability index (PDI) at baseline, one week, and one, three, six and twelve months post procedure.

## **Completion date**

31/12/2016

# **Eligibility**

## **Key inclusion criteria**

1. Diagnosis of CCH according to the criteria of International Classification of Headache Disorders 2nd edition (ICHD-II)
2. Duration of CH exceeding three years
3. Daily attacks
4. Resistance to more than two pharmacological prophylactic treatments with adequate trials including rizatriptan or other available drugs in Taiwan (verapamil, lithium or steroid)
5. Treatment by vidian neurectomy ranked as a precise cut, with follow-up exceeding one year
6. Aged 17 years and over

## **Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Sex**

All

**Key exclusion criteria**

Patients with cluster headache who show good response to pharmacological treatments.

**Date of first enrolment**

01/03/2013

**Date of final enrolment**

31/12/2015

## **Locations**

**Countries of recruitment**

Taiwan

**Study participating centre**

**Taipei Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation**

No.289, Jianguo Road

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New Taipei City

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## **Sponsor information**

**Organisation**

Taipei Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation

**ROR**

<https://ror.org/037r57b62>

## **Funder(s)**

**Funder type**

Other

**Funder Name**

Investigator initiated and funded

## Results and Publications

**Individual participant data (IPD) sharing plan**

The datasets generated during and/or analysed during the current study are/will be available upon request from Dr Shao-Cheng Liu (m871435@ndmctsgh.edu.tw)

**IPD sharing plan summary**

Available on request

**Study outputs**

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes