Clinical characteristics of headache in ischemic stroke. A Mexican case series.

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Introduction

Headache in ischemic stroke (IS) has an incidence between 8-34%. The clinical description varies between the different series reported. Headache has been reported to be more frequent in IS that involve the posterior circulation. Previous studies have found that headache associated with IS has a more similar clinical profile to tension-type headache. To our knowledge, despite the different series of IS published in Mexico, none has studied headache *ad hoc*.

The objective is to communicate the clinical characteristics of headaches associated with acute IS in a Mexican population.

Material and methods

Prospective study of consecutive cases with a diagnosis of acute IS by neuroimaging, included in iReNe (i-Neurovascular Registry) and PREMECEF (First Mexican Registry of Headaches) from September 2018 to September 2019, hospitalized in the Neurovascular Care Unit of the Neurology Service, University Hospital "Dr. José E. González" of the UANL. All patients had a clinical evaluation with special attention to the clinical characteristics of the headache, as well as a complete neurovascular work up. In the case of aphasic patients, the information was collected from their relatives. Results are presented with descriptive statistics.

Results

282 subjects were included during the study period, of which 45 (15.9%) had headaches; 23 (51.1%) men and a mean age of 56.5 ± 15.3. The most common cardiovascular risk factors were sedentary lifestyle (75.5%), arterial hypertension (71.1%), diabetes mellitus (62.2%), alcohol consumption (48.8%), and smoking (42.2%). Headache was the initial symptom in 21 (46.6%) and the reason for consultation only in 4 (8.8%); 25 (55.5%) used headache medication prior to arrival at the emergency room. A previous chronic headache was only identified in 4 (8.8%). The most frequent headache characteristics were a stabbing and oppressive quality in 28.8% each, an immediate zenith in 35.5%, a mean VAS intensity of 7.6, bilateral pain in 64.4%, occipital involvement in 57.7%, accompanying symptoms in 71.1%, and the most frequent were nausea in 46.6% and dizziness in 37.7% **[Table 1]**.

The etiology of IS determined by the TOAST classification was atherosclerotic in 15 (33.3%), lacunar in 9 (20%), cardioembolic in 4 (8.8%), and was not determined in 17 (37.7%). Regarding the location of the IS, 33(73.3%) were in the anterior circulation (7 in the lenticulostriate artery) and 12 (26.6%) in the posterior circulation. There was no correlation between any of the headache characteristics and the location or etiology of the IS.

Table 1. Headache clinical characteristics.

Stabbing	13 (28.8 %)
Oppressive	13 (28.8 %)
Pulsatile	8 (17.7%)
Burning	1 (2.2 %)
Immediate zenith	16 (35.5 %)
Zenith from 6 min to 4 h	9 (20 %)
Zenith >4 h	4 (8.8 %)
Bilateral location	29 (64.4 %)
Occipital involvement	26 (57.7 %)
Frontal involvement	21 (46.6 %)
Parietal involvement	18 (40 %)
Pain irradiation	8 (17.7 %)
Accompanying symptoms	32 (71.1 %)
Nausea	21 (46.6 %)
Dizziness	17 (37.7 %)
Photophobia	11 (24.4 %)
Vomiting	9 (20 %)
Allodynia	3 (6.6 %)
Phonophobia	2 (4.4 %)
Aggravating factors	10 (22.2 %)
Postural changes	6 (13.3 %)
Valsalva maneuver	4 (8.8 %)

Discussion

The relationship between headache and IS is well known. However, its pathophysiology is still uncertain. Although our results were similar to other series, there is little information about the negative characteristics of headaches. In our group, only one patient with a previous headache had migraine-like characteristics. The negative characteristics were selected because others such as dizziness and dysautonomic manifestations can be a manifestation of IS.

We did not find any correlation between any of the headache characteristics and the location or etiology of the IS.

Conclusion

This is the first Mexican series that addresses this issue. Our series shows a similar incidence to the previous series of headaches in IS. The clinical characteristics of headaches are not useful in the etiological and topographic diagnosis of IS. Negative data could be important in the study of headaches in patients with IS.

References

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