



International
Headache Society

MIGRAINE WITH AURA IN THE POPULATION OF BUENOS AIRES, ARGENTINA: ASSOCIATION ANALYSIS OF 6 SNPs

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INTRODUCTION
Migraine with aura is a complex disabling neurological disorder that manifests with episodic and recurrent attacks. It has a high prevalence and socioeconomic impact. Its causes are both environmental and genetic, and the latter are relevant for prevention and treatment. In Argentinian population, the variation of genetic markers related to pain perception have showed certain differences with other populations of the world. However, genetic variants related to migraine have not been analyzed in the population of Argentina.

OBJECTIVES
The objective of this study is to characterize migraine with aura in the population of Buenos Aires, through the analysis of genetic variants previously reported for other populations in association to this disorder.

MATERIALS AND METHODS
DNA from 203 donors (105 migraineurs and 98 controls) was obtained from saliva samples and genotyped for the SNPs rs12134493 (*TSPAN2*), rs10166942 (*TRPM8*), rs10456100 (*KCNK5*), rs4910165 (*MRVI1*), rs11031122 (*MPPED2*) and rs6081613 (*SLC24A3*) through allele-specific PCR amplification. Resolution of bands was performed through 2% agarose gel electrophoresis. The data were analyzed using the programs Arlequin, Genalex, Infostat, and SNPStats for calculating allele and genotype frequencies, Hardy-Weinberg equilibrium (HWE), genetic differentiation (FST and AMOVA), and association analysis. This study was previously approved by the Ethics Committee of IMBICE, and all donors gave written consent for participation in it.

RESULTS
The cases fitted the HWE ($p>0.05$) for all the SNPs and in the control group they fitted with the exception of rs12134493 and rs4910165. Concerning differentiation between groups, non-significant differences were found between cases and controls (Figures 1 and 2). A model of logistic regression was performed using all genotypes of the analyzed markers. For rs10456100, association was significant ($X^2=4.15$; $p=0.0416$) in TT genotype taking as reference CC, giving an odds ratio (OR) of 0.11 (confidence interval 0.01-0.92) while the other SNPs did not show significant association (Table 1).

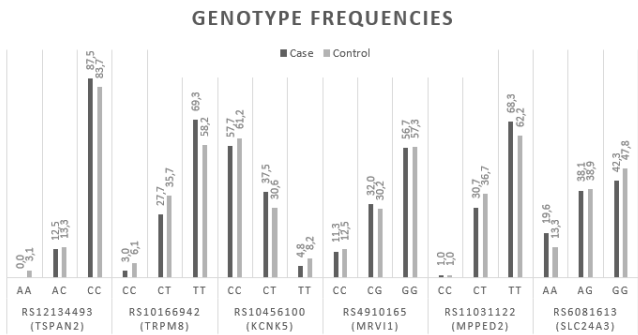


Figure 1. Genotype frequencies (percentages) of cases and controls.

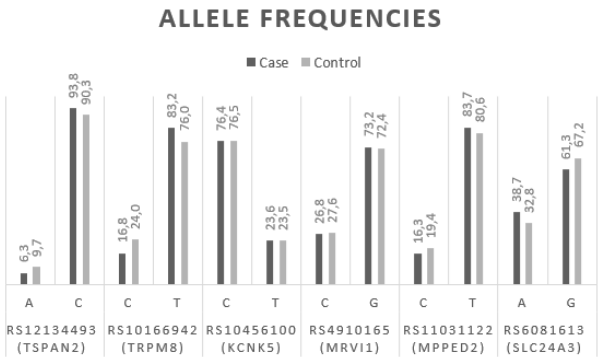


Figure 2. Allele frequencies (percentages) of cases and controls.

Genotipo	X ²	p	OR	CI
CT	0,51	0,4772	1,29	0,64-2,57
TT	4,15	0,0416	0,11	0,01-0,92

Table 1. X² and odds ratio (OR) estimations for rs10456100 (taking CC genotype as reference).

CONCLUSIONS
We found that the T allele of rs10456100, which has been reported as a risk allele in other populations of the world, is probably acting as protective when it is present in homozygous genotype in our population. These preliminary results need confirmation in a larger sample size, nevertheless they suggest a particular genetic basis of migraine with aura in the studied population. Moreover, as additional genetic markers will be included in this study, the information might be of help for defining a better treatment of local migraine patients.

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INTRODUCTION

It is of crucial importance to quickly stratify the risk of patients with headaches in the emergency setting, especially considering how secondary headaches are associated with high morbidity and mortality. Mnemonics are a useful tool to remember the alarm criteria in those cases. Such mnemonics were written in English and Spanish, but none in Portuguese.

OBJECTIVES

To present the first mnemonic method in Portuguese for alarm criteria in emergency headaches in order to facilitate their identification and diagnosis.

MATERIALS AND METHODS

A search was made through different databases for a mnemonic method regarding alarm criteria in emergency headaches that was written in Portuguese. None were found. Thus, the emergency criteria were gathered and turned into a mnemonic in Portuguese.

RESULTS

We present the mnemonic method “RISADA PEGA” (“laughter spreads”, in English):

R - Repentina / (Sudden onset)

I - Início depois dos 50 anos / (onset in a patient older than 50)

S - Sinais e/ou sintomas de doenças sistêmicas ou neurológicas / (Signs and/or symptoms of systemic or neurologic diseases)

A - Anormalidades no exame neurológico / (abnormalities upon neurologic examination)

D - Depressão da imunidade (AIDS, Câncer) / Depressed immunity (HIV or cancer)

A - Antecedentes: doenças que podem acometer o SNC; número de vindas ao PS, história familiar de cefaleia) / (prior conditions: diseases affecting the central nervous system; number of visits to the health center, history of headache in the family)

P - Padrão alterado (mudança no padrão anterior da cefaleia) / (change in headache pattern)

E - Esforço / (exertion; effort, headaches with Valsalva's maneuver or headache associated with sexual activity)

G - Gravidez / (pregnancy)

A - Autonomia (sinais autonômicos) / (autonomic signs)

CONCLUSIONS

Secondary headaches are challenging complaints in the emergency department, especially considering the time constraints for diagnosis and initial treatment in this department. This shows the usefulness of a method to quickly identify the alarm criteria and, through that, correctly stratify the patient's risk and initiate treatment. As far as we know, this is the first mnemonics in Portuguese for the alarm criteria in emergency headaches and we believe this tool can be very useful in teaching and clinical settings.

Observation

The full text was recently published in Headache and Medicine. DOI: <https://doi.org/10.48208/HeadacheMed.2021.58>

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ALGORITHM IN THE PREVENTIVE TREATMENT OF CLUSTER HEADACHE IN MEXICAN PATIENTS.

Maria-Karina Velez-Jimenez, Silvia García, Manuel Gudiño-Castelazo, Adriana Martínez-Mayorga, Ildefonso Rodríguez-Leyva.



OBJECTIVE

Simplifying the preventive treatment of cluster headache patients will help the physician unfamiliar with this pathology to give the most adequate and specific treatment to patients suffering from this disease, using the available presentation that exists in our country.

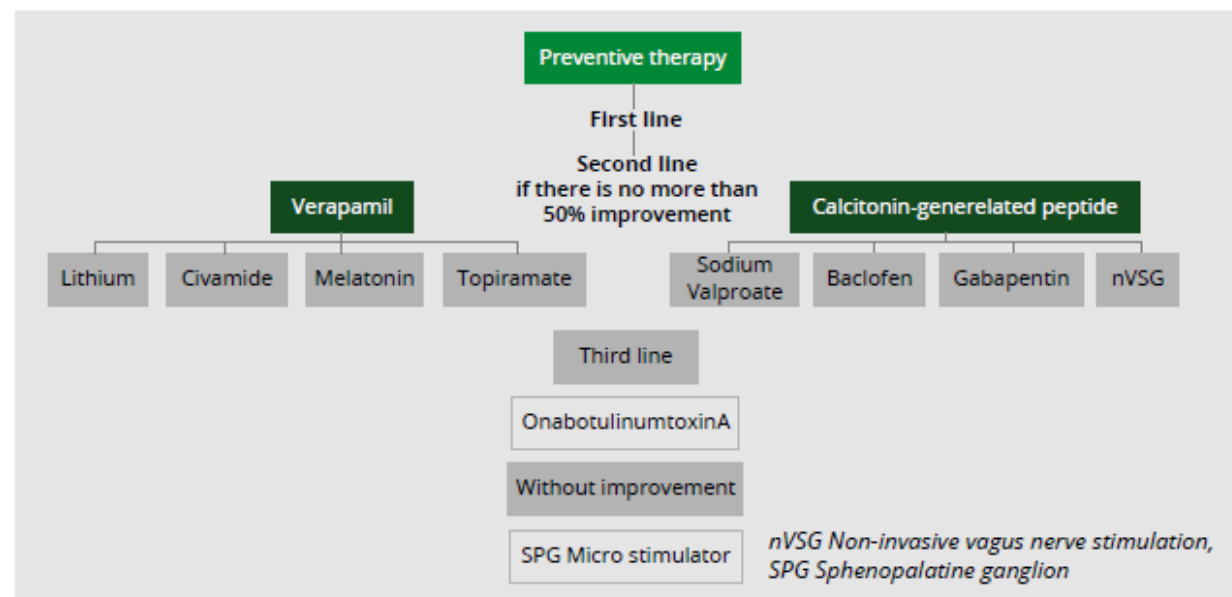
BACKGROUND

Cluster headache is classified within the group of Primary Autonomic Trigeminal Headaches that affects 0.1 % of the population. Although it is not very frequent, its management is always a challenge due to the characteristics of the pain: its severe and disabling intensity, its association with the cranial autonomic symptoms that characterize it, the duration and frequency of the episodes, as well as the pattern associated with the circadian rhythm and annual circadian rhythm.

The preventive treatment of cluster headache with most drugs used was not specifically designed for this disease; however, controlled clinical studies compared with placebo have demonstrated its effectiveness.

HYPOTHESIS

Currently, in Mexico, we have a monoclonal antibody approved for this type of headache by the FDA and EMA. Although we do not have this approbation in Mexico by COFEPRIS (our regulatory agency), its use off-label using a lower dose, can be effective enough.



MATERIAL AND METHODS

We have several patients in follow up with initial doses of 240 mg of galcanezumab, and monthly application of 120 mg to 240 mg SC of the same drug.

RESULTS

We found with both doses a good response in our patients suffering from pathology.

CONCLUSION

Although we do not have the weight of evidence from a controlled clinical study, the application of this anti-CGRP monoclonal may be a useful alternative in a pathology that is highly disabling.

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Monoclonal antibodies against CGRP pathway in patients with migraine. Experience in a Headache Clinic

Nagel Vanesa, Cavanagh Sol, Grandinetti Mariela, Calvo Daniela, Gutierrez Teresa, Larripa Natalia, Bravo Yasmin, Tajan Emilia, Bonamico Lucas, Goicochea Teresa



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Introduction:

Calcitonin gene-related peptide (CGRP) plays an important role in the pathophysiology of migraine through nociceptive mechanisms in the trigeminovascular system. Several studies demonstrate the safety and effectiveness of monoclonal antibodies (mAbs) against CGRP or its receptor as preventive treatment for episodic migraine (EM) and chronic migraine (CM).

Objectives:

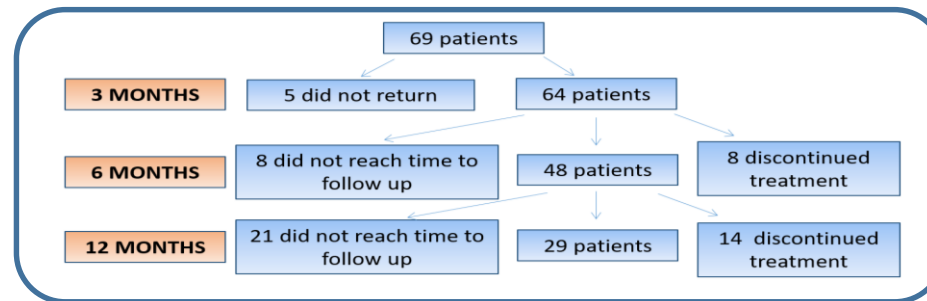
To evaluate the experience of treatment with mAbs against CGRP pathway in patients with EM and CM evaluated at a headache service in Argentina.

Materials and Methods:

Retrospective, descriptive study. We reviewed electronic medical records of patients evaluated in our headache service with EM or CM who received Erenumab (70 or 140 mg) or Fremanezumab (225 mg) in monthly subcutaneous injections as preventive treatment of migraine between 07/2019 and 03/2022. The following information was obtained: age, sex, headache days/month (HDM), medication overuse headache, migraine preventive medication (in the previous month and at 3, 6, 12 months after starting treatment), type and dose of mAbs, adverse effects (AE) and response at 3, 6 and 12 months after starting treatment (reduction less than 30%, between 30 to 50%, greater than 50% or no reduction in HDM).

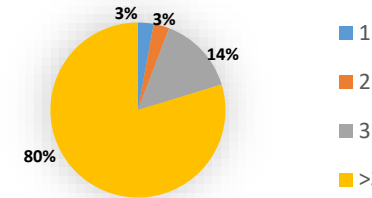
Results:

- 69 patients were included (86% women, 14% men) with a mean age of 51 years old
- 83% used Erenumab and 17% Fremanezumab



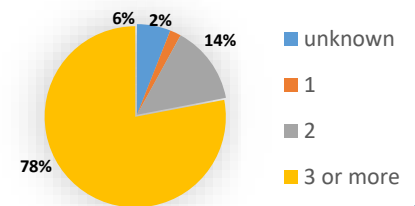
Graphic 1

Number of types of preventive drugs used before mAbs



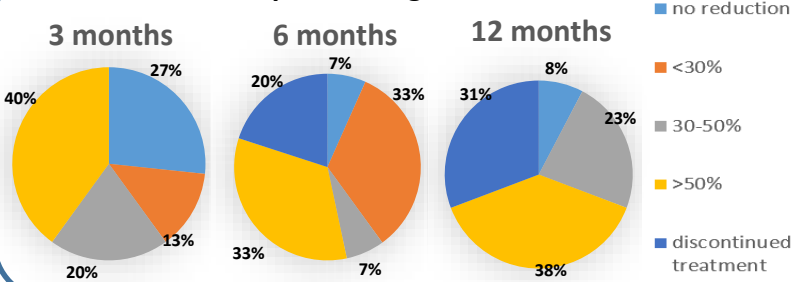
Graphic 2

Number of applications of Botulinum toxin



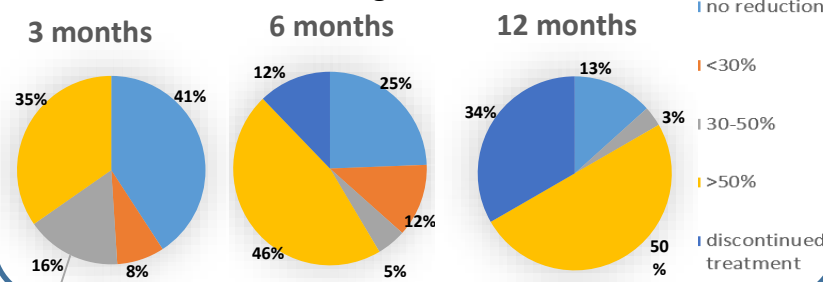
Graphic 3

Episodic migraine



Graphic 4

Chronic migraine



Graphic 5

- 14 discontinued: 9 because no response, 4 because costs, while 1 because fertility treatment.
- 12 presented adverse effects, constipation was the most frequent. All received Erenumab and no one had to stop treatment.
- 32 patients (50%) had MOH before treatment: 17 completed 12-months follow-up, 16 of them without MOH.

Conclusion:

In real world Erenumab and Fremanezumab are effective as preventive treatment for patients with EM and CM, even in those who failed with other treatments, including botulinum toxin.

A reduction in the overuse of analgesic medication was registered.

Good adherence and tolerance were observed, without discontinuing treatment due to AE.

It is necessary to consider mAbs treatment in patients with EM or CM who have not responded to previous treatments.

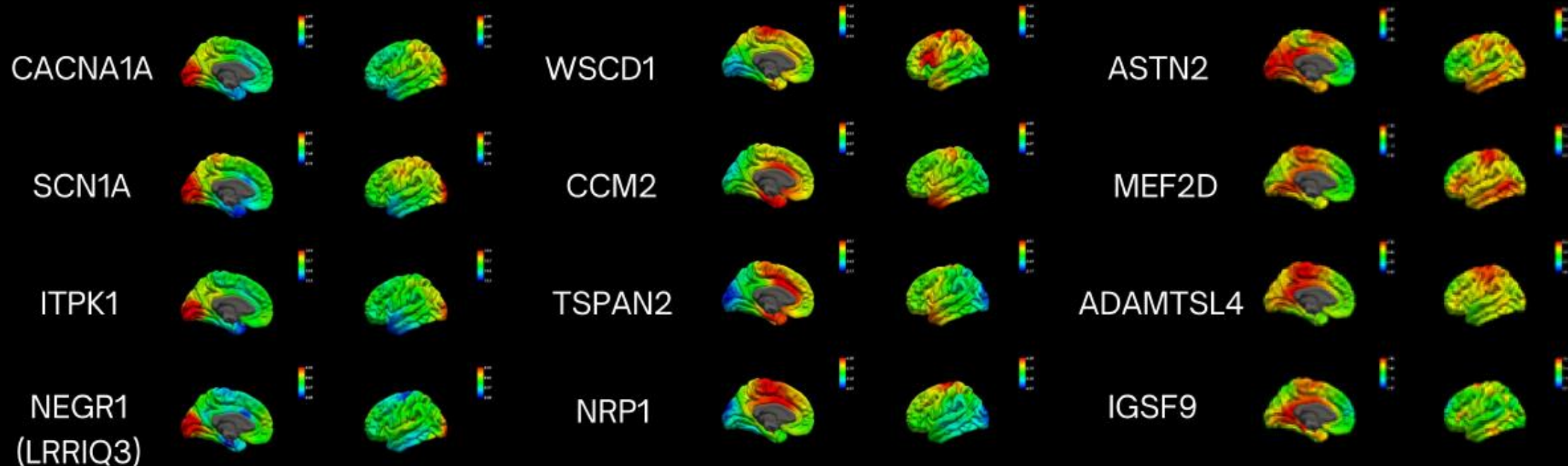
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Analysing cortical expression patterns of migraine-associated genes: a new perspective on migraine genetics

Marco Lisicki, Mariela Carpinella, Marcelo Filipchuk, Tatiana Castro Zamparella, Diego Conci Magris

- We evaluated cortical expression patterns of migraine-associated genes seeking for additional information on migraine genetics.
- Gene expression models were grouped based on their similarity using neural network clustering.
- Numerous genes exhibit similar expression patterns. Marked contrasts in regions implicated in migraine were observed in most cases.
- Gain or loss of function of migraine-associated genes could produce focal functional alterations.
- A new paradigm including both gene function and topographic expression might be superior to currently disseminated approaches.
- Translational studies are warranted.



exemplary gene maps in clusters

IMPACT OF COVID-19 PANDEMIC LOCKDOWN ON MIGRAINE PATIENTS IN LATIN AMERICA

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Introduction:

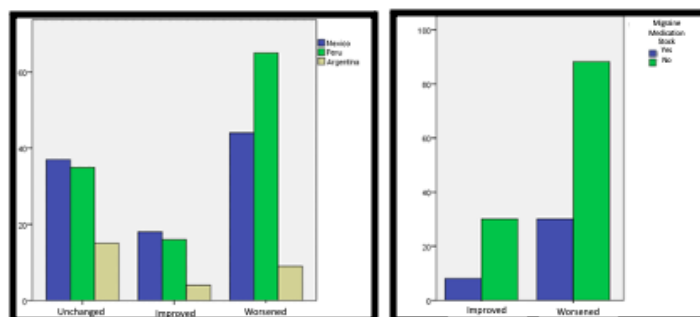
During the coronavirus (COVID-19) pandemic, home confinement, fear of COVID, lifestyle changes, and worldwide health care impacted almost all diseases. Reports from countries outside Latin America found differences in their migraine patients.

Objective:

Describe and compare the immediate changes in migraine associated with COVID-19 lockdown in patients from three Latin American countries with different restrictions (Argentina, México, and Perú).

Methods:

An online survey was conducted from May to July 2020. The survey was answered by 243 migraine patients (85.2% women), with questions related to sociodemographic data, lockdown conditions, changes in working conditions, physical activity and coffee intake, changes in healthcare access and acute migraine medication use, symptoms of anxiety and depression, and the questionnaire fear of COVID-19.



Results:

The results showed that 48.6% of migraine patients worsened their symptoms, 15.6% improved their symptoms, and 35.8% remained unchanged. Worsening migraine symptoms were associated with staying at home during the lockdown. Intake of analgesics was associated with an 18 times increase for worsening migraine symptoms than those that did not increase their intake OR 18.07 (8.606 - 37.956).

Migraine improved when sleep hours increased, and we found an improvement when patients decreased analgesic intake.

		Migraine					
		Total	Remain unchanged	Improvement	Worsening	p-value	
Sleep patterns	Unchanged	29 (11.9%)	19 (21.8%)	3 (7.9%)	7 (5.9%)	0.00003*	OR
	Change in sleep schedule/time (better)	70 (28.8%)	27 (31.0%)	24 (83.2%)	19 (16.1%)		OR
	Worse sleep	144 (58.3%)	41 (47.3%)	11 (28.9%)	92 (78.0%)		OR

Questions regarding COVID-19 news and social media, symptoms caused by COVID-19, and the uncertainty about when the pandemic will stop, were the three items that contributed to the worsening of migraine in the patients in the three countries.

Conclusions:

Confinement during the first pandemic wave in Latin America harmed migraine patients who stayed at home during lockdown

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Long-term effectiveness of combined unilateral Sphenopalatine and Occipital nerve stimulation in patients with refractory chronic cluster headache

Andreani, JC, Bruera, OCJ, Bashkansky, D Lisicki, M; Piedimonte FC



Introduction

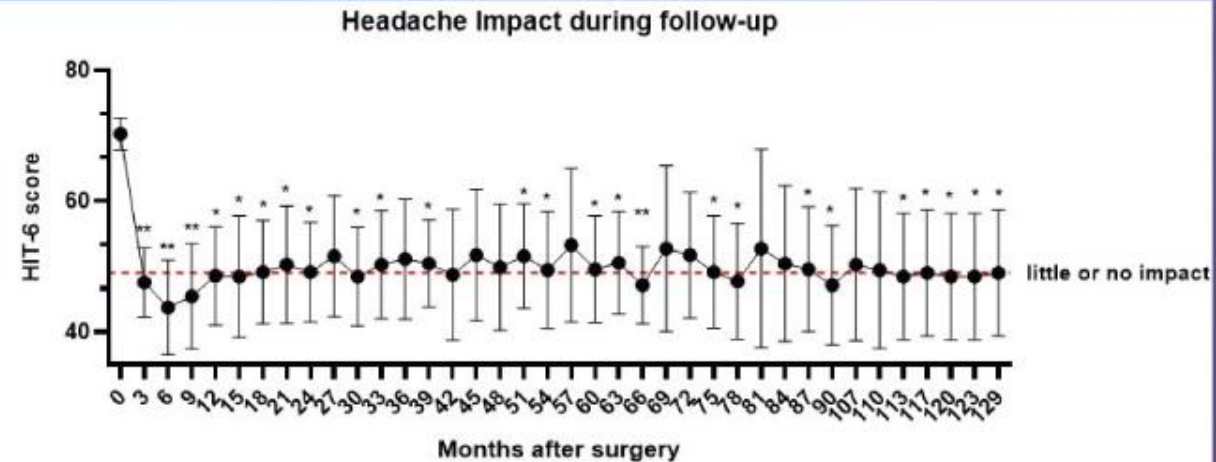
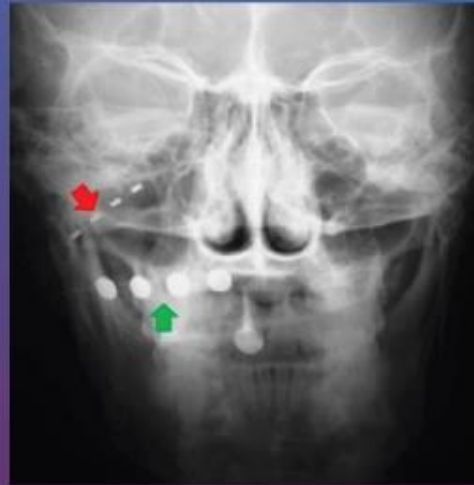
We present the results of a prolonged follow-up of refractory chronic cluster headache patients receiving combined invasive occipital and sphenopalatine ganglion neuromodulation.

Patients & Methods

Seven patients suffering from refractory CCH (3f / 4m) underwent implantation of electrodes for sphenopalatine ganglion (SPG) and greater occipital nerve (GON) stimulation.

Results

Mean follow-up was $8,13 \pm 1,9$ years. Six out of the seven patients (86%) experienced good-to-excellent initial pain relief, and achieved an almost complete remission of symptoms later on. Mean HIT-6 values decreased to the 'Little or no impact' severity level (Fig 1) already during the first control after surgery, and persisted similarly low during subsequent visits. Alike results were observed in the VAS. The total number of attacks also decreased significantly from $44,7 \pm 19,6$ to $13,2 \pm 7,4$ per month. Electrode migration requiring a re-intervention was observed in two patients at 12 days and at 3 months after surgery, regaining the initial benefit in one case. One patient passed away during follow-up due to an unrelated cause.



A NEUROPSYCHOLOGICAL PROFILE-BASED CLASSIFICATION OUTPERFORMS ICHD-3 IN TERMS OF DISABILITY: EXPLORATORY ANALYSIS WITH ANATOMICAL CORRELATES

Tatiana Castro Zamparella, Mariela Carpinella, Marcelo Filipchuk, Verónica Balaszczuk, Carolina Maldonado, Diego Conci Magris, Marco Lisicki

Introduction

Migraine patients are not all equally affected by the condition. Recognizing the degree of impairment is fundamental to personalize treatment. The International Classification of Headache disorders recognizes two types: episodic and chronic. Therefore, it remains to be determined whether novel strategies could provide better outcomes. In this study, we compared migraine-related disability between patients classified according to the ICHD-3 or classified using a neuropsychological profile-based classification system and performed a supplementary gray matter (GM) volume analysis to better understand our findings.

Materials and Methods

Neuropsychological evaluations of 135 migraine patients

For neuropsychological profile-based classification, results from the evaluation protocol. Headache Impact Test (HIT-6) and Migraine Disability Assessment (MIDAS) results were compared between groups.

Voxel-based Morphometry (VBM) supplementary analysis included a subgroup of 48 patients. Differences in GM ($p < 0.001$ unc) are presented.

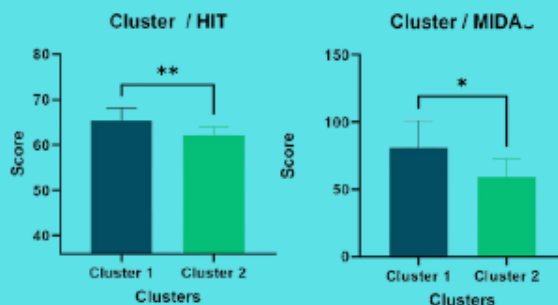
Results

ICHD-3 Classification:

75 episodic and 60 chronic

Clustering Classification:

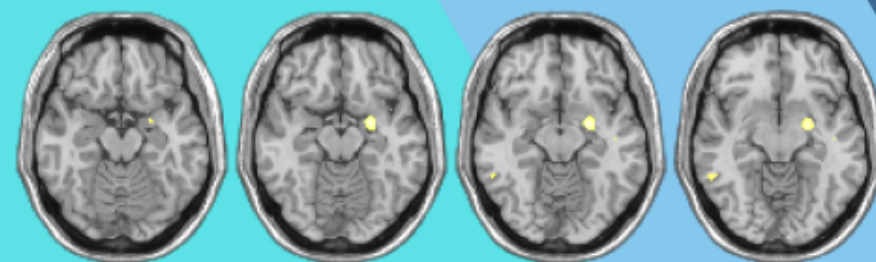
49 cluster I and 86 cluster II



Disability and impact of migraine are greater in Cluster I than in Cluster II

Conclusions

Our results suggest that a neuropsychological profile-based classification system that could be readily implemented in the clinic would provide a better insight into migraine severity. neuropsychological profile-based clustering segregated patients with different gray matter volume close to a region recently determined to be the hub of a common migraine network. If corroborated in larger cohorts, these findings have implications not only at the single patient level, but also for epidemiological, pharmacological and pathophysiological studies.



VBM analyses showed greater GM volume in the left superior temporal, left parahippocampal, right inferior temporal, and right superior frontal gyri of chronic patients compared to episodic, and increased GM in the right precuneus and left superior parietal lobe of patients in cluster 1



Strategic planning for the headache working group of the Colombian Association of Neurology-ACN - Proposal

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(3) Promedan, Neuroclínica, Neuromédica, Medellín, Colombia.

(4) Uni-Empresarial Cámara de Comercio – Bogotá, Colombia

Introduction

Strategic planning refers to the transformational process whereby an organization establishes management objectives and determines indicators to evaluate its evolution (1). Strategic plans for specific public health programs and some specific clinical care areas have been published

Objectives

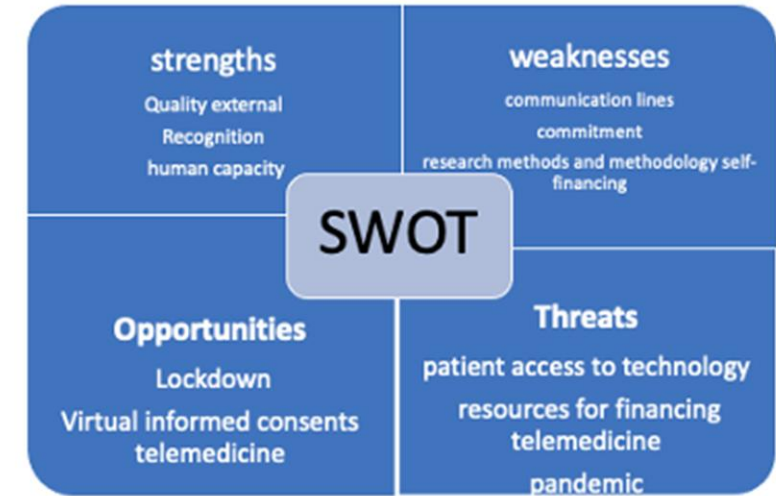
To design a strategic planning model within the ACN (Association Colombian Neurology) headache working group.

Methods The process was carried out through the execution of philosophical, analytical and operational phases, virtual meetings were held over a period of 6 months

Conclusion

Strategic planning is an organizational tool that can be implemented by the ACN headache working group to generate collaborative work to rise up the generation of value products and guarantees the quality of academic processes.

IB Analytical phase



Approach strategy → Conduct research for journals Q1 - Q2
Strengths/Opportunities

IC Operational phase

Indicators for periods of 2 years



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THE BEST FRIEND OF A MIGRAINE SUFFERER

Tatiana Castro Zamparella, Diego Conci, Marco Lisicki

Introduction

Migraine is a disabling neurological disorder that affects a large part of the world population. In addition to intense headache, those who suffer from it have a great social impact, absenteeism from work, disruption of daily life and **high symptoms compatible with depression and mood disorders.**

Materials and Methods

49 patients were studied. The ICHD-3 criteria were used to establish the diagnosis of migraine and the Beck Depression Scale (BDI) to determine the presence and severity of depressive symptoms. The HIT-6 and MIDAS scales were also used, which measure impact indexes of headache and disability, respectively.

Results

Nearly sixty percent (57.14%, $n=28$) of the participants were dog owners. There were no statistically significant differences between dog-owning and non-dog-owning patients in terms of age, gender, percentage of medication, HIT score, or MIDAS score. 44.9% of patients with migraine evaluated suffer from depression according to the results of the BDI-II. Dog owners were significantly less likely to be depressed compared to their counterparts (32.14% vs. 61.9%, respectively. $X=4296.1$; $p=0.038$).

Conclusions

The data show that a large percentage of **patients with chronic migraine also present symptoms of depression.** However, **dog ownership seems to have a positive influence on the mood of patients,** presenting fewer symptoms of depression and less negative impact of suffering from headache.



Botulinum Toxin A in the preventive treatment of chronic migraine; experience in Argentine headache center

N Larripa – M Grandinetti – D Calvo – V Nagel – MT Goicochea. Headache Clinic. Department of Neurology: Fleni



Introduction and objective

Chronic migraine (CM), is defined as at least 15 headache days per month, with a minimum of 8 of them with migraine features, during the last three months (ICHD). In 2010, the use of a Botulinum Toxin type A (BoNTA), was approved as a preventive treatment for this neurologic disease. Its use has spread and, currently, it corresponds to a pharmacological tool in patients with CM. Its main mechanism of action is by blocking the exocytosis of algogenic peptides and excitatory substances such as substance P, CGPR and glutamate, in the synaptic gap of nociceptive afferents. In our country there is scarce information published about the response to this treatment. The objective of this study is to describe our experience in the headache service in Argentina, with the administration of BoNTA as a preventive treatment for CM

Materials and methods

A retrospective analysis was performed by reviewing the digital medical records of all patients from the Headache Clinic, treated with BoNTA between January and December 2021. Patients ≥ 18 years old were included, with at least 1 application of BoNTA according to the dose and points included in the PREEMPT protocol. Epidemiological data, coexistence of acute headache medication overuse, duration of treatment (year of initiation, number of application), number of previous oral preventives received, evolution during treatment, number of headaches days per month, days of analgesics per month, were evaluated. We consider non responder patients if they had less than 30% reduction of headache days per month after 3 treatment cycles. The review of adverse events and patient reported wearing off effect of the therapeutic benefit of BoNTA was registered. For data analysis, the STATA/14.0 program was used.

Results

The records of **394 patients** were analyzed. 91% were female (fig. 1), mean age 46 (range: 18-85). 66% (n 241) had coexisting medication overuse (fig.2). All patients had received at least one previous oral preventive treatment, with a median number of preventives of 3.

42% of the patients analyzed were carrying out applications two years ago, 20% more than two years ago and 37% were starting treatment (1-3 applications).

82% (n 317) had already received 3 or more applications. 40% (n160) reported deterioration at the end of the dose, 4% (n15) reported some adverse effect associated with the application, without being a reason for discontinuation of treatment (Fig.3). 162 patients kept a headache diary, 65% of which responded with a $\geq 50\%$ reduction in headache days/month and 15% had a $\geq 30\%$ decrease in the frequency of headache days per month (Fig.4). 34% reversed the overuse of analgesics.

Gender

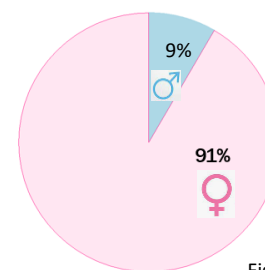


Fig.1

Analgesic Overuse

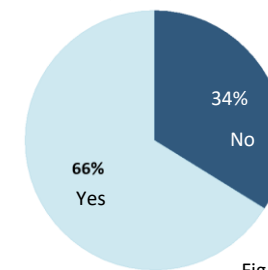


Fig.2

Adverse Events

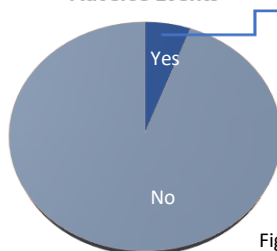


Fig.3

N15
4%

- Cervical Tension. n5
- Myofascial pain in trapezoids. n2
- Weakness in neck extensors n2
- Pain at the point of infiltration n2
- Mild bilateral palpebral ptosis n1
- Complaint in aesthetics. n1
- Hypotension in procedure n1
- Pustule at 1 point of inf. n1

N162 kept
Headache Diary

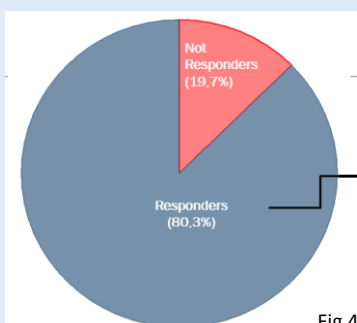
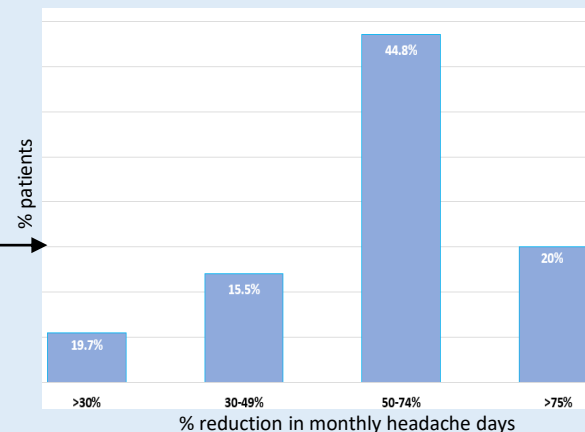


Fig.4



Conclusions

In local clinical practice BoNTA has an important role in the treatment of CM, high percentage of patients reduce the headache day per month and days of acute headache medication. It is an effective and well tolerated treatment for CM

BRAIN ACTIVITY IN INTERICTAL, ICTAL AND CHRONIC MIGRAINE

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INTRODUCTION AND OBJECTIVE

Migraine is a fluctuating disorder. Analyzing changes in cerebral activity throughout migraine variations has contributed to the understanding of the pathophysiology of this condition in the past. Exact Low Resolution Electromagnetic Tomography (eLORETA) is an EEG-based approach that allows to reconstruct cortical electrical activity, providing explicit information regarding neural activations, and not their indirect markers. The objective was to compare cortical activity between interictal, ictal and chronic migraine patients and healthy controls.

MATERIALS AND METHODS

1 minute EEG:

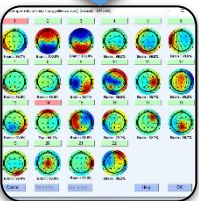
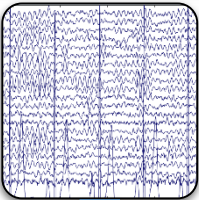
- 22 EEG channels.
- 1 EKG channel.
- 100 subjects:
- 25 healthy.
- 25 interictal.
- 25 ictal.
- 25 chronic.

Pre-processing:

- 1 Hz low band-pass filter.
- Line noise removal.
- Artifact removal with ICA.
- Re-referenced to linked mastoids.

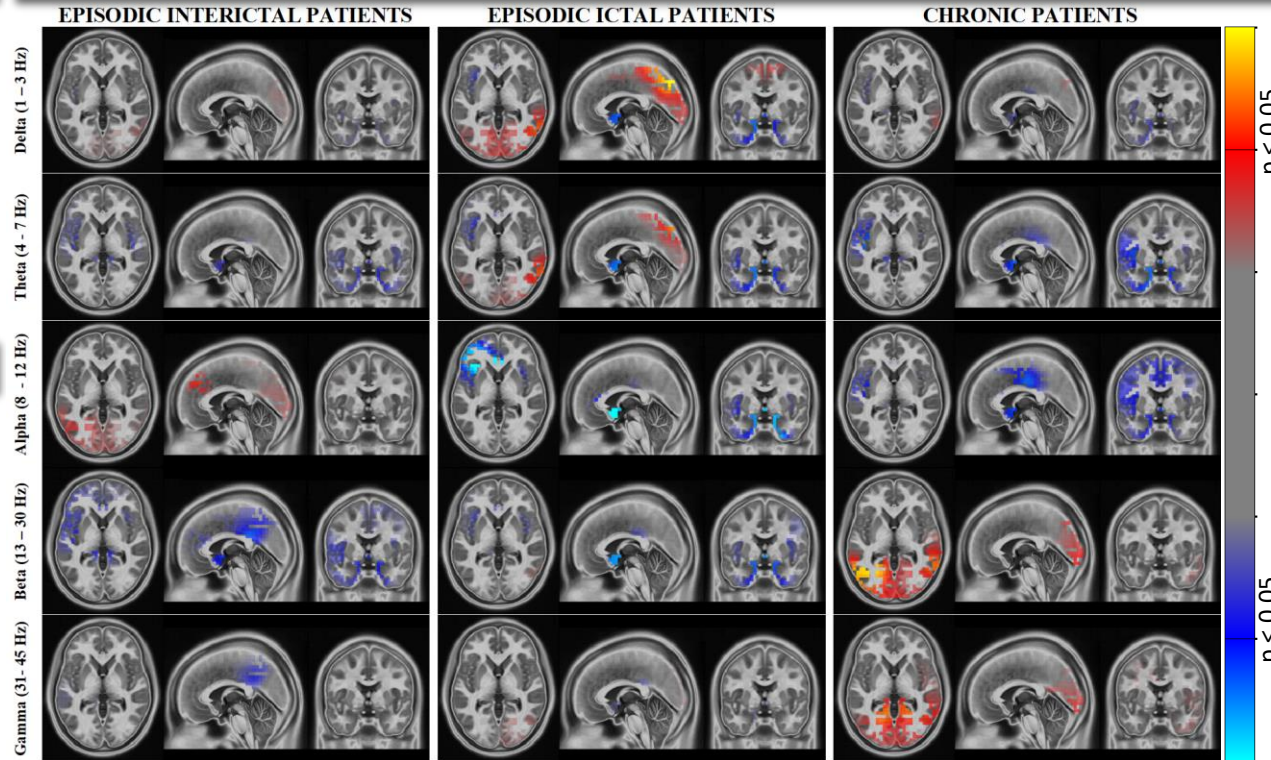
Cortical generators:

- 1-45Hz activity.
- Subject-normalized.
- Group comparisons for each frequency band.



Obtained eLORETA cortical generator maps were used for statistical comparisons (whole brain, voxel-wise) against healthy controls.

RESULTS



In the left extrastriate visual cortex higher alpha activity was observed in the interictal group.

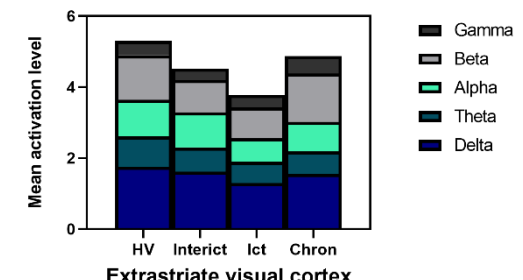
The subgenual and right dorsal entorhinal gyrus presented significantly lesser activity in ictal migraine patients compared to the other groups.

The ictal and chronic groups exhibited lower and higher frequency activity, respectively.

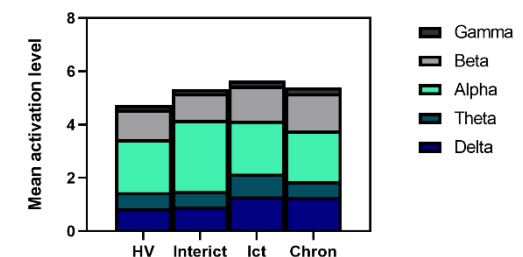
6 regions of interest emerge:

- Bilateral subgenual gyrus (BA25)
- Left extrastriate visual cortex (L-BA7)
- Right inferior temporal gyrus (BA20)
- Right dorsal entorhinal gyrus (R-BA34)
- Bilateral supramarginal gyrus (BA40)
- Bilateral posterior cingulate cortex (BA31)

Subgenual gyrus



Extrastriate visual cortex



CONCLUSIONS

- Brain activity tends to vary in relation to migraine phase and severity.
- Key regions exhibiting variations include the subgenual gyrus, tightly connected to the hypothalamus and brainstem, and a portion of the extrastriate visual cortex (BA7), which harbours V3a, known of its implications in migraine aura.
- Our findings of reduced neural activity in the subgenual gyrus in ictal migraine patients suggest that the increased blood flow observed in this region during

spontaneous migraine attacks in seminal studies might, in fact, reflect increased inhibitory neuron activity. Similarly, the phase and severity-dependent band-specific alterations in the visual cortex that we found expand our knowledge about migraine electrophysiology, particularly the thalamocortical dysrhythmia commonly described.

General Neurologists prescription Practices For Migraine Attacks With Emphasis On Opioids

Bancalari B., Ernesto¹, Wicht S, Astrid².



Introduction Opioids have been widely indicated for headaches in the past. Today, it is recognized as a Public Health problem worldwide. Physicians, specially neurologists, should avoid prescribing them for migraine headaches, since it’s abuse is one of the causes of Medication Overuse Headache (MOH).

Objectives To understand migraine prescription practices between Neurologists attending the 2018 Peruvian National Neurology Congress.

Material and Methods We performed a 13 question survey between Neurologists attending the bi annual meeting in 2018 in order to understand their prescription practices. We also wanted to know if they considered opioids drugs were indicated for the treatment of migraine, and if so, if they indeed prescribed them. Out of 150 attendees, 56 of them answered the survey.

Results Around 27% of neurologists that answered the survey prescribed NSAIDs for a migraine attack, 23% Triptans as monotherapy, 14% Triptans and other analgesic, 14% ergotamine and 7% opioids.

When asked if Opioids were indicated for Migraine Headaches, 43% of them answered they were. When asked those that answered that opioids were indicated, if they in fact prescribed them, 88% did use opioids for migraine headaches. There was no difference in Neurologists’ age and opioid indication believe. Those that were aware that opioids should not be indicated for migraine, did not use them at all. There was a statistical difference between those two groups ($p < 0.000$).

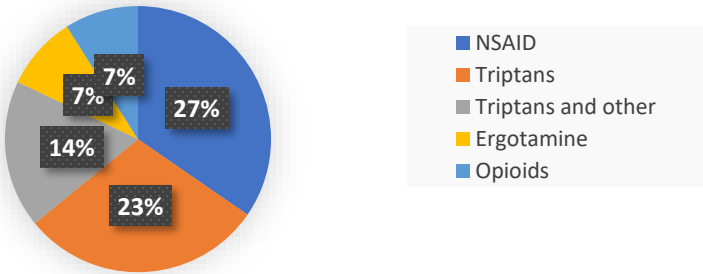
Discussion Medication overuse headache is a frequent cause of consultation at headache specialists’ practice. A recent paper published in Headache Medicine found that neurologist, more than general practitioners, were causing medication overuse headache in migraineur patients. Understanding what neurologists prescribe for migraine headaches can give us a view on why MOH could be a problem generated by them. Although our survey is not intended to look for MOH, neurologist prescription practices could be a good indicative of the problem.

Our finding points out two interesting results. NSAIDs and Triptans are mostly used for Migraine attacks by neurologists, although there is a 7% of them that do use opioids. Ergotamine is no longer the main drug used for migraine headaches.

The second finding is that neurologist are not aware that the use of opioids for migraine headache is not a good practice. Since there was no statistical difference in prescribers age in the group of those that thought opioid should be used for migraine headaches, we can conclude that knowledge of this indication has been passed from teachers to residents.

Conclusion Efforts should be made to educate neurologists on migraine prescription practices specially on the use of Opioid therapy.

Medication Prescribed in Migraine Attacks



Migrainous Infarction: Case series in a neurological center of Buenos Aires

Wainberg F (1), Castiglione JI (1), Burdet L (2), Rodriguez Perez MS (3), Goicochea MT(4)

- 1. Neurology department. FLENI.
- 2. Diagnostic imaging department. FLENI.
- 3. Vascular Neurology. Neurology department. FLENI.
- 4. Headache clinic. Neurology department. FLENI.



Background and objectives

Migrainous infarction (MI) is a rare complication of migraine with aura (MwA) that must be considered in patients that present with aura episodes lasting more than 60 minutes. According to ICHDIII criteria, one or more migraine aura symptoms associated with an ischaemic brain lesion in the appropriate territory demonstrated by neuroimaging, confirm the diagnosis. The objective of this series is to describe our experience related to patients with MI.

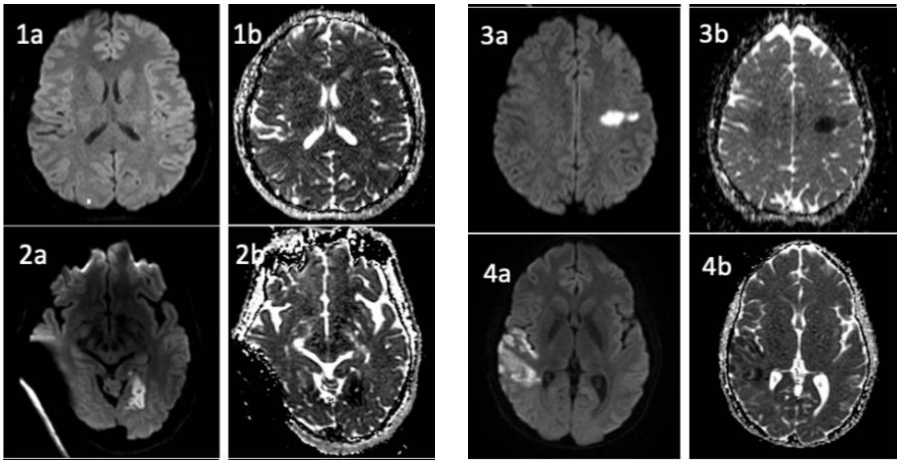
Materials and methods

Clinical records of adult patients with MI diagnosed at our institution from June/2006 to June/2020 were retrospectively reviewed. Demographic data, neuroimages findings, treatment and long-term evolution were analyzed.

Results

Table 1: general information

Patient number	Sex	Age	CV risk factors	Years since MwA diagnosis	Type of habitual aura	Ergotamine derivatives/ triptans use	Duration of aura symptoms	NIHSS at first evaluation	Stroke volume on MRI (cm3)	Vascular territory affected	NIHSS at discharge
1	F	28	Smoker	> 5	Visual + sensory	X	3 hs	0	0.5	MCA	0
2	F	27	No	> 5	Visual + motor	X	5 hs	1	1.45	MCA	0
3	M	64	Hipertension / previous smoker	> 5	Visual + language	X	4 hs	2	0.3	MCA	0
4	F	26	Smoker	> 5	Visual	X	4 hs	0	0.65	PCA	0
5	M	25	No	> 5	Visual + sensory	✓	24 hs	0	0.155	PCA	0
6	F	35	Previous smoker	> 5	Visual	✓	24 hs	0	0.175	PCA	0
7	F	94	High cholesterol	> 5	Visual	X	30 min	0	0.15	PCA	0
8	F	29	Smoker	> 5	Visual	✓	24 hs	0	19.1	MCA-PCA	0
9	M	25	No	> 5	Visual	X	4 hs	1	0.732	MCA-PCA	0
10	F	50	No	> 5	Visual	✓	1.30 hs	0	3.293	PCA	0
Median	-	28.5	-	-	-	-	9.4	-	0.575	-	0



Images 1-4

Brain MRI shows punctiform right occipital restrictive image in diffusion sequences (1 a-b: patient 7). Cortical left occipital restrictive image with embolic resemblance (2 a-b: patient 10). Subcortical left frontal restrictive image (3 a-b: patient 2). Cortical right parieto temporal restrictive image (4a-b: patient 8)

Conclusion

We observed MI in young patients with low prevalence of common stroke risk factors. Unlike previous reports that showed higher incidence of MI during the first year of MwA, all of our patients declared an evolution of 5 years or longer at diagnosis. We found no differences in territory prevalence. After discharge, all patients initiated preventive migraine treatment, with no neurological deficit and no recurrence of MI (last follow up june 2020)

CV: Cardiovascular, MRI: magnetic resonance imaging, MCA: medial cerebral artery, PCA: posterior cerebral artery, ICA: internal carotid artery

Spontaneous Intracranial Hypotension: clinical characteristics and treatment in 23 patients

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Headache Clinic. Department of Neurology¹. Department of Anesthesiology². Fleni. Argentina

Introduction:

Spontaneous Intracranial Hypotension is caused by cerebrospinal fluid (CSF) leakage without traumatic cause in the previous month. Orthostatic headache is the most common symptom. Brain Magnetic Resonance Image (MRI) usually shows suggestive signs. The initial treatment is based on conservative measures: rest at 0 degrees, hydration and caffeine. Sometimes it is necessary to perform blood patches or surgery.

Objectives:

To analyze clinical characteristics, complementary studies and treatments performed on patients diagnosed with spontaneous intracranial hypotension in a headache service in Argentina

Materials and Methods:

Descriptive, retrospective study. We reviewed the electronic medical records of patients diagnosed with Spontaneous Intracranial Hypotension evaluated between 01/2012 and 03/2021 in our headache service. Conservative measures and rest at 0 degrees for at least 48 hours were indicated in all cases. Sex, age, type of headache, time to diagnosis, other symptoms, complementary studies, treatment and response at first and sixth month of treatment were considered.

Results:

23 patients (56% women) were evaluated. Mean age was 59 years. Time to diagnosis 51 days.

- Symptoms (Graphic 1)
- Brain and Spinal MRI (Graphic 2)
- Treatment (Graphic 3)

Conclusions:

In this cohort orthostatic headache was the most frequent symptom in Spontaneous Intracranial Hypotension, although a percentage of patients may lack it.

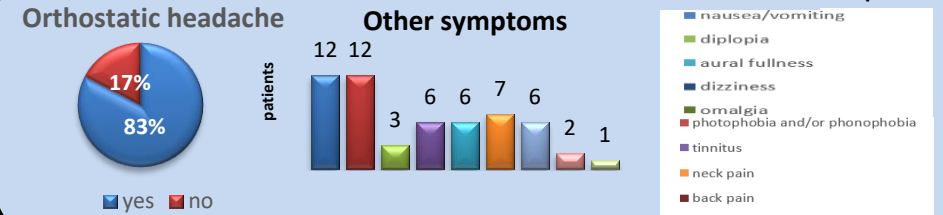
In most this cases brain MRI showed indirect signs, although a normal study does not exclude the diagnosis. Treatment can be challenging, as a significant proportion of patients remain symptomatic at 6 months, even after blood patching.

The delay in diagnosis decreases the chances of a successful treatment. Identifying the CSF leakage is important, since targeted treatment could be more effective.

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Syndrome of cerebral spinal fluid hypovolemia Clinical and imaging features and outcome. Sun J. Chung, MD; Jong S. Kim, MD; and Myoung C. Lee, MD. NEUROLOGY 2000;55:1321-1327
Early epidural blood patch in spontaneous intracranial hypotension. S. Berroir, MD; B. Loisel, MD; A. Ducros, MD; M. Boukobza, MD; C. Tzourio, MD; D. Valade, MD; and M-G. Bousser, MD. NEUROLOGY 2004;63:1950-1951

Graphic 1

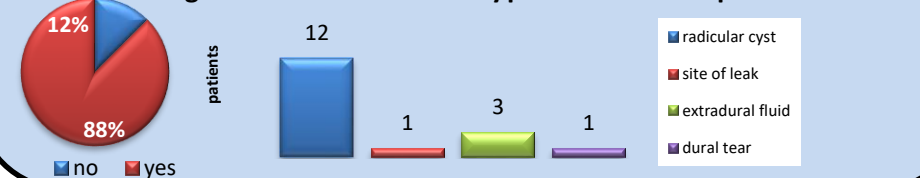


Graphic 2

Signs of intracranial hypotension in Brain MRI

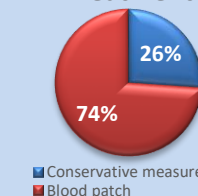


Signs of intracranial hypotension in Spinal MRI



Graphic 3

Treatment

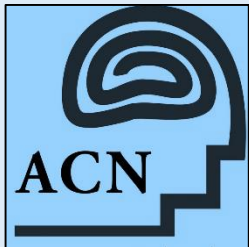


Response to conservative measure

	No headache	Headache	No follow up
At month	4 (66%)	1 (17%)	1 (17%)
At 6 months	3 (50%)	1 (17%)	2 (33%)

Response to blood patches

	No headache	Headache	No follow up
At month	12 (71%)	5 (29%)	0
At 6 months	7 (41%)	7 (41%)	3 (18%)



Pillars of diagnosis and treatment of migraine (PDTM) Information from primary care physicians in Colombia.

Joe Munoz-Cerón, Loren Gallo

Hospital Universitario MEDERI, Clínica Universitaria Colombia, Fundación Universitaria Sánitas
Bogotá - Colombia

Introduction

Most of the migraineurs are attended by primary care physicians (PCPs). There is no information regarding the level of knowledge of this topic at PCPs in Colombia.

Methods

Cross sectional study.

Objective

To determine the proportion of PCPs who use the ICHD 3 criteria, prescribe preventive treatment, restricts analgesics and consider comorbidities according to guidelines (PDTM)

Conclusion

There is a great opportunity to educate PCPs in Colombia

Results %

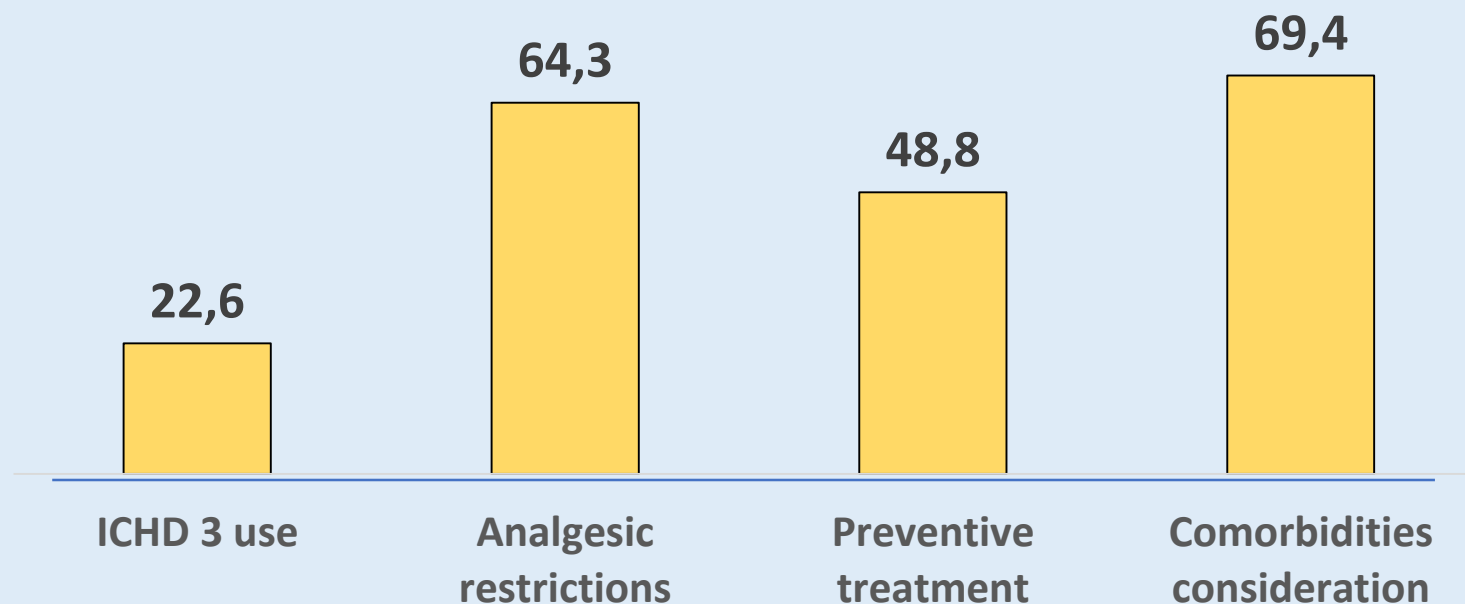
n:347



65.5%



20-60 y



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"MIGRAÑA CRÓNICA EN MANEJO CON TOXINA BOTULÍNICA, CARACTERIZACIÓN DE LOS PACIENTES Y EVOLUCIÓN DE LA ENFERMEDAD"

Septiembre 2022

Raúl Juliet Pérez¹, Vánili Gómez Godoy², Jessica Miranda Mora³, Francisco Bustos Espinoza³¹ Neurólogo Hospital Dipreca; ² Residente Neurología Adultos Hospital Dipreca; ³ Interno de Medicina Hospital Dipreca

Palabras clave: migraña, toxina botulínica tipo A, cefaleas secundarias.



1.

INTRODUCCIÓN

La migraña crónica (MC) es una patología que presenta una prevalencia estimada entre el 2 y el 3 % en la población mundial. Es una cefalea incapacitante, con importante impacto en la calidad de vida y de altos costos económicos asociados. La meta del tratamiento es mejorar la calidad de vida, disminuyendo la frecuencia, intensidad y duración de la crisis, siendo la profilaxis una de las piedras angulares en el manejo de esta patología; dentro de las opciones de tratamiento, ha sido reconocida la eficacia de la onabotulinumtoxin-A en MC asociado a la desintoxicación y suspensión del fármaco en sobreuso.

2.

OBJETIVOS

El propósito de nuestro estudio es establecer el perfil evolutivo y características epidemiológicas de pacientes tratados en el Hospital DIPRECA que tengan diagnóstico de migraña crónica en los cuales se usó toxina botulínica, asociado o no a cefalea por sobreuso. Al mismo tiempo, realizar seguimiento de las cifras de escalas MIDAS y HIT-6 en el mismo periodo de observación.

3.

METODOLOGÍA

Estudio retrospectivo observacional, con revisión de bases de datos del sistema interno del Hospital DIPRECA. Se buscó a pacientes con diagnóstico de Migraña Crónica entre los años 2015-2021, de estos se incluyeron solo aquellos que estuvieron al menos 1 año en tratamiento con toxina botulínica. Por medio de la revisión de fichas clínicas, fue posible realizar la caracterización epidemiológica y consignar el comportamiento de las escalas MIDAS Y HIT-6. El análisis estadístico se realizó con el software Python (v3.10.7) y la librería Pandas (v1.4.4).

44 sujetos cumplieron con los criterios de inclusión. Luego del análisis estadístico, se obtuvo que el 84.09% eran mujeres, con edad media de 43.43 años (DE \pm 10.98 años). La cefalea por sobreuso estaba presente en un 76.92%. En conjunto, las patologías psiquiátricas fueron la comorbilidad asociada más prevalente (9.85%). Los valores promedio iniciales de la escala HIT-6 fueron de 81.60 puntos (DE \pm 40.40 puntos) y la cifra promedio final obtenida luego de 4 intervenciones fue 52.73 puntos (DE \pm 9.70 puntos). Los valores de MIDAS iniciales fueron de 37.53 puntos en promedio (DE \pm 32.46 puntos) y la cifra final obtenida luego de 4 intervenciones fue 11.87 puntos en promedio (DE \pm 12.36 puntos). Se observaron mayores cifras de inicio en la escala de HIT-6 en los pacientes con sobreuso de fármacos, con una caída más acentuada luego de la primera intervención (Figura 1). De los encuestados, en la actualidad, 20 sujetos cumplían criterios de sobreuso de fármacos, dicha población correspondía a aquellos que no registraban controles de manera constante y/o presentaban abandono del tratamiento.

4.

RESULTADOS

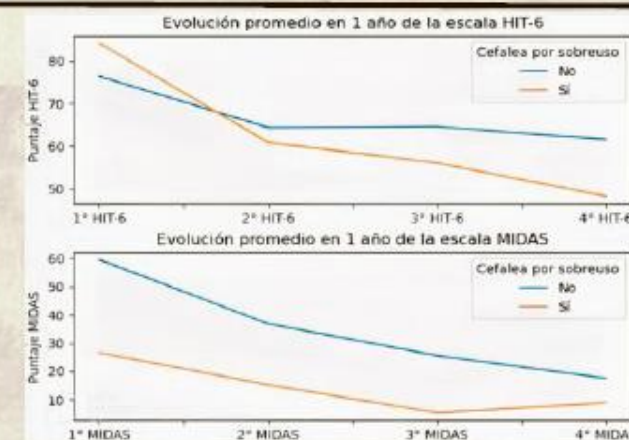


Figura 1. Evolución promedio de las escalas MIDAS y HIT-6 durante 1 año en pacientes con diagnóstico de MC en tratamiento con bótox.

5.

CONCLUSIONES

Dentro de los pacientes con MC encontramos una prevalencia de cefalea por sobreuso similar a los estudios internacionales. La MC se asocia a varias comorbilidades, siendo mayor su asociación con patologías psiquiátricas. La utilidad del seguimiento anual de las escalas utilizadas en el estudio (HIT-6 y MIDAS), en pacientes con migraña crónica y cefalea por sobreuso muestra un comportamiento más marcado de respuesta en esta última subpoblación.

6.

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Cephalalgia heterotopica: a case series of extratrigeminal cluster headache

Mariano da Silva Junior H., Alberto Bordini C. Affiliation: PUC- Campinas, Medicine, Campinas, Brazil. Department of Neurology, UniFACEF Medical School, Franca, Brazil.

Introduction: Cluster headache is a very disabling neurological disorder that usually presents with unilateral severe headache associated with ipsilateral cranial autonomic symptoms. Even among the typical cases, there is a considerable diagnostic delay and most patients will have seen three general practitioners before being referred to neurology services, some having been to colleagues in dentistry or otorhinolaryngology.

The extratrigeminal presentation of this condition poses a great obstacle to a proper diagnostic workup.

Objective: This consecutive case series study aimed to report clinical features, treatment, and outcome of 3 patients with extratrigeminal Cluster Headache.

Materials and Methods: Case series of our Headache Clinic. Data disclosure was authorized by the patients through an informed consent form.

Results: Two males and one female were evaluated. The ages were 53, 64, and 71 years. The mean age of symptoms onset was 50, 60, and 66 years, respectively. Two patients described excruciating shoulder pain and one presents severe pain in the malar area (**Figure**). All patients reported prominent autonomic ipsilateral symptoms such as lacrimation, conjunctival injection, nasal symptoms, and restlessness accompanying pain attacks. Preventive treatment with verapamil and occipital nerve block was useful.

Conclusion: The location of Cluster pain in the extratrigeminal territory represents a diagnostic challenge. Prompt recognition of these cases not only prevents unnecessary examination and treatment trials but directly benefits the patients since effective treatment is already available. A proper case definition of this rare clinical presentation may provide new insight into our understanding of CH mechanisms.

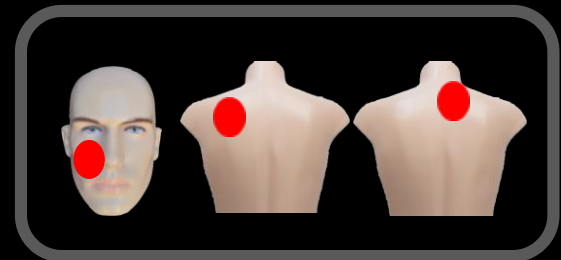


Figure: Pain location in our group of patients.



International
Headache Society

Glossopharyngeal neuralgia due to lacunar infarction of PICA: an unusual case

María E. Novoa M.¹ María Alfaro-Olivera¹
Instituto Nacional de Ciencias Neurológicas¹. Lima-Perú



OBJECTIVE:

We present an unusual case of GPN, secondary to a lacunar infarct in the p2-segment of the PICA.

INTRODUCTION

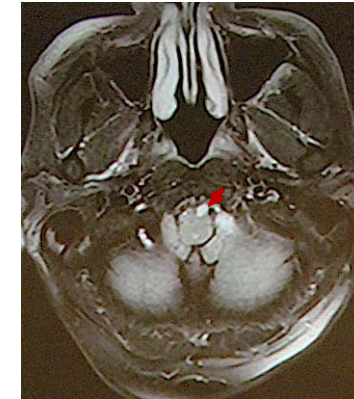
- Glossopharyngeal neuralgia (GPN) is of sudden onset, lasting seconds, usually caused by cold stimuli when chewing, swallowing, talking, coughing, yawning, and sneezing(1).
- Painful paroxysms are characteristic, located mostly in the oropharynx and irradiated to the middle ear or vice versa, due to involvement of the pharyngeal branch or auricular branch of the glossopharyngeal nerve (GN)(2).
- According to the ICHD-3 (International Classification of Headache Disease-3), classic GPN occurs due to vascular compression(3, 4). Secondary GPN, due to underlying disease; while idiopathic GPN has no causal evidence(5).
- Incidence of 0.7/100,000/year, 9:5 males over females, average age 64 years, left location, 12:9(6).
- Infarcts of the posterior inferior cerebellar artery (PICA), an unusual cause of GPN cause of GPN, involving small vessels, associated with risk factors, would explain the ischemic etiology.
- They represent 40% of cerebellar infarcts, compared to the anterior inferior cerebellar artery (AICA) and the superior cerebellar artery (SUCA)(7).
- The PICA is divided into 5 segments; anterior medullary (p1), lateral medullary (p2), tonsillomedullary (p3), telovelotonsillar (p4) and cortical (p5). Being, the lateral spinal cord segment (p2), the most involved(8). Represented by Wallenberg syndrome(9).
- T2weighted imaging (T2WI) is more sensitive than fluid-attenuated inversion recovery (FLAIR) in identifying posterior fossa infarcts(10, 11).

CASE DESCRIPTION

- 65-year-old male, with no apparent pathological history.
- He reports sudden oropharyngeal pain, radiating to the mandibular angle and left ear, as bursts of electric shocks between 7 and 10 seconds, 2 times a day, when chewing, swallowing and speaking.
- Concomitantly, dizziness and vertigo are limited to the week of onset of pain.
- Oropharyngeal tactile stimulation causes a burst of pain that paralyzes the patient for a few seconds.
- The T2 sequence (T2W1) of the MR showed a small hyperintensity in the lateral medullary segment of the left posterior inferior cerebellar artery (PICA).
- Uncontrolled arterial hypertension, cardiac arrhythmia and hypothyroidism were the risk factors found in the patient.
- Indicating pregabalin (75 mg/1 time/day) and the management of heart attack risk factors.

DISCUSSION

- The case presented did not characterize Wallenberg syndrome. However, it compromised the prominence of the bulbar olive, up to the origin of the rootlets of the GN, where the pharyngeal branch of the left GN could be injured(5, 12) and cause GPN.
- Meanwhile, the scant surrounding edema in the small ischemia would promptly explain the limited dizziness and vertigo.
- The theory of mechanisms of hyperexcitability and ephaptic transmission in central neurons, activating N-methyl-D-aspartic acid receptors in the GN(13).
- They would explain the efficacy of antiepileptic drugs in neuralgia.
- Pregabalin at minimal doses controlled the patient's outbursts of pain.



MRI T2W1 sequence showed small hyperintensity in left PICA-p2.

CONCLUSION

GPN of small infarct in the PICA territory is an unusual condition. In our case, the lateral anteromedullary segment of the left PICA compromised the ipsilateral GN. The T2W1 of the MR sequence revealed hyperintensity in PICA-p2. Management with pregabalin was effective.

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Paroxysmal facial pain in a patient with Parry Romberg Syndrome

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Objective

Parry Romberg Syndrome (PRS) is a rare disease, characterized by hemiatrophy of the skin and facial soft tissues, it can affect muscles, cartilage and bones.

The cause has not been identified. It has been related to trauma, vascular malformations, infections, immune-mediated processes and alterations of the sympathetic nervous system. Neurological clinical manifestations occur in approximately 20% of cases, headaches and facial pain are some of them.

The objective is to describe the clinical characteristics of facial pain in a patient, report its association with PRS and response to treatment.

Case Description

A 27-year-old woman with a diagnosis of PRS and a history of bruxism and episodic migraine without aura, controlled with ibuprofen, referred stabbing and paroxysmal pain of 7 years of evolution. Pain was in the left temporal and maxillary region, lasting from seconds to 1 minute, moderate intensity and some episodes associated with homolateral temporal and masseter muscle spasm. Frequency of 5 times a day. She referred another sharp and severe left eye pain, lasting 2 hours with ipsilateral congestion and rhinorrhea lasting 24 hours, up to 2 crises per day and 10 crises per month, with response to indomethacin.

Physical examination revealed left facial hemiatrophy, episodic homolateral temporal and masseter muscle spasm and preserved sensitivity in the trigeminal territory.

Brain magnetic resonance imaging (MRI): isolated nonspecific white matter punctiform lesions. Magnetic resonance angiography of intracranial arteries was normal. Magnetic resonance neurography of the cranial nerves showed hypertrophy of the left muscles of mastication, except for left masseter which was smaller on the left side., decreased volume of the submandibular gland and decreased thickness of the soft tissues. Thinning of the hemifacial and hemicranial bone structures as well as of the left soft tissues was observed.

Cranial nerves presented normal caliber, course and signal. Temporomandibular joint (TMJ) MRI: dysfunction of both TMJs. Electromyogram of the left masseter and temporal muscles: when presenting the masticatory spasm, contraction of the temporal muscle was observed, followed sequentially by the masseter before ending.

Gabapentin treatment was started without improvement. Treatment with botulinum toxin, under EMG guidance of the left masseter and temporal muscles was started with 80% improvement in pain and spasm.

Conclusion

The association between PRS and hemimasticatory spasm is rare and is associated with compromise of the trigeminal nerve.

It is described that the sympathetic hyperactivity produced by an inflammatory process affects the blood vessels and the cranial nerves and this would cause tissue damage. Due to the atrophy of the soft tissues, mainly of the masseter and temporalis muscles, there is a focal demyelination of the peripheral branches of the trigeminal nerve, which causes an abnormal excitation of the fiber and consequently facial pain.

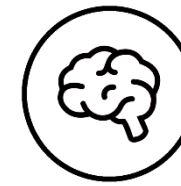
This patient had two different kinds of pain, paroxysmic facial pain and a longer lasting ocular pain with autonomic signs probably as a consequence of trigeminal involvement. More studies are needed to elucidate the cause.



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Case report: a paroxysmal hemicrania responsive to verapamil



Núcleo de estudos em
Cefaleias e Algas Cranianas
no Oeste do Paraná



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Objective: Paroxysmal hemicrania is a rare type of trigeminal autonomic headache, whose diagnostic criteria include responsiveness to indomethacin. In this report, we present a case of a patient with a partial response to the first-line drug therapy and good responsiveness to verapamil.

Case Description: A 56-year-old woman presented with a 1-year history of throbbing pain in the left hemiface, and retro-orbital and temporal ipsilateral pain, which lasted for about 30 minutes with a frequency of 5-6 episodes per day, and a maximum remission period of 3 months. The headache attacks were associated with nasal congestion and allodynia and had worsened recently. Her past medical history was positive for major depressive disorder and hypertension. At the time she presented, she was taking carbamazepine 900 mg per day, which resulted in partial relief of the pain. Clinical examination revealed pain on palpation of the trigeminal nerve branches on the left side, bilateral temporomandibular pain, and pain on palpation of the right greater occipital nerve. Magnetic resonance angiography of the head did not show any abnormality. To manage the headache attacks, treatment was started with indomethacin 300 mg in the

occurrence of the pain episodes, along with chlorpromazine 6 mg per day and carbamazepine 200 mg per day, which decreased the intensity of the pain but did not influence the frequency of the attacks. Therefore, verapamil 80 mg per day was started, continuing the use of previously prescribed medications. Given the normal ECG result, the dose of verapamil was increased to 240 mg per day, and carbamazepine was discontinued. The patient progressed with only two mild episodes of pain per month.

Conclusion: Responsiveness to indomethacin is an important diagnostic criterion for paroxysmal hemicrania, yet some patients have an incomplete response to this therapy. The use of alternative therapies is limited by the lack of research and evidence supporting treatment with other drugs. Nevertheless, it is worth noting that indomethacin should not be neglected as the first therapeutic choice, and non-responsiveness to the first-line drug should increase the possibility of alternative diagnoses. Verapamil was effective in this case, corroborating with case reports that obtained this same result. However, further studies are needed to evaluate alternative treatments to indomethacin, especially regarding verapamil and other calcium channel blockers.

Dermatologic Finding During Migraine Headache Attack



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Objective

To report a patient with migraine and ecchymotic lesions in relation with migraine attacks possibly due to trigeminovascular activation and autonomic vascular dysfunction.

Case description

A 21 year-old woman diagnosed with episodic migraine with aura since the age of 14, who described her headaches as hemicranial, throbbing pain associated with sensitivity to light and sound, with a frequency of five to six severe episodes per month, some of them accompanied by visual aura.

She recently noticed eyelid ecchymosis ipsilateral to the side her pain developed. It appeared on both, right or left side and upper or lower eyelids depending of the pain side during the attack. The ecchymosis usually lasted a couple of days and was not associated with oedema or vegetative manifestations.

Neurologic examination and brain MRI were normal, blood workup revealed no evidence for vasculitis or coagulation disorders. She started topiramate 25 mg bid with improvement of headache frequency and resolution of periorbital ecchymosis. On a follow up calls she reported baggy eyes during a migraine attacks but no ecchymosis.

Conclusion

Our case describes an unusual finding during migraine attacks, such as periorbital ecchymosis with a possible pathogenic mechanism of autonomic vascular dysfunction following trigeminovascular activation during migraine attacks.

Previous reports have described red forehead dot syndrome, red ear syndrome and periorbital ecchymosis in migraine patients. It has been hypothesized that activation of the trigeminovascular system leading to extracerebral vasodilatation with extravasation of red blood cells in the V1 distribution of the trigeminal nerve via the release of vasoactive peptides could cause these phenomena. Another factor may be coagulation changes with heparin release from mast cells and basophilic leukocytes, previously documented during migraine attacks.



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Abnormal brain CT perfusion in a patient with a migraine with aura episode: Case report.

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Clinical case

A 30 year old male patient, without cardiovascular risk factors or migraine history, presented to the emergency department with a 90 minutes negative visual defect compatible with right homonymous hemianopia with progressive improvement and bifrontal headache. At admission, no other neurological deficits were found. He was immediately studied with a non-enhanced computed tomography (NECT) and CT angiography (CTA) with no pathological findings. CT perfusion (CTP) showed a prolonged Time-to-Maximum (Tmax) in both posterior cerebral arteries territory as a sign of hypoperfusion. As symptoms were potentially disabling and ischaemic stroke was suspected, treatment with alteplase was administered. Patient persisted with residual visual deficit for at least 24 hours. A magnetic resonance imaging scan was performed at that point, with no evidence of acute ischemic images. Diagnosis of transient ischemic attack versus debut of probable migraine with prolonged aura (MA) was initially made. At 10 month follow-up, he presented a new episode of visual aura with positive symptoms, confirming the diagnosis of MA.

Images

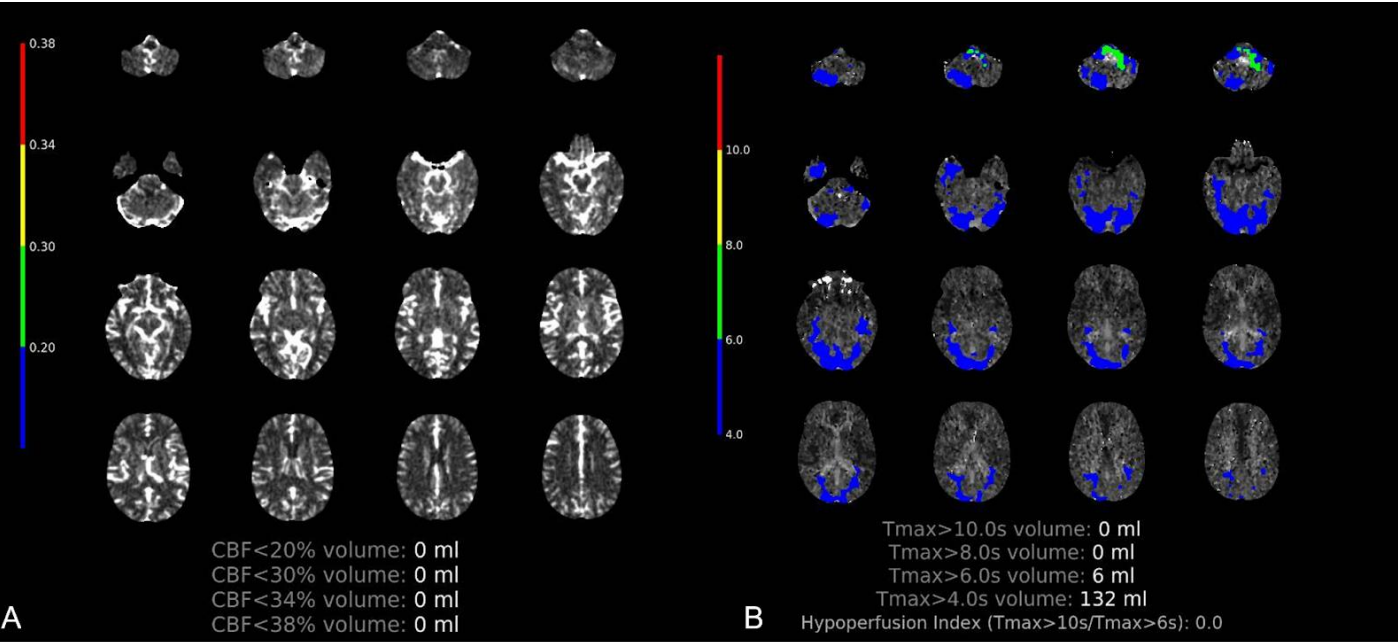


Image 1: Brain CTP showed no alterations on CBF (A) and prolonged max (B) in both occipital lobes, not reaching the critical hypoperfusion threshold (Tmax > 6 seconds).

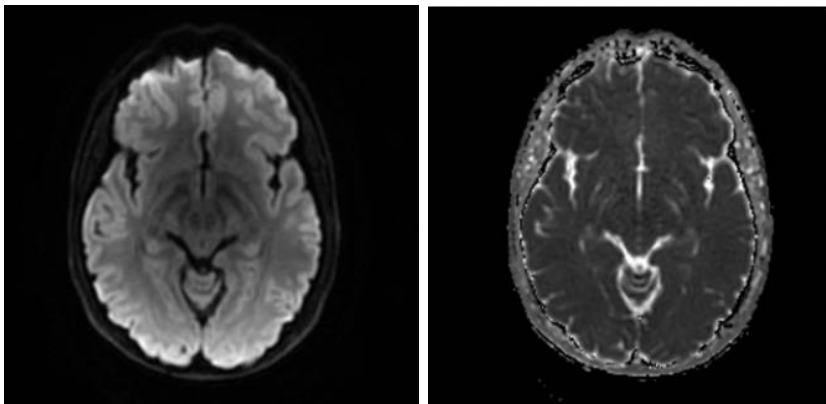


Image 2: Brain MRI performed after 24 hs of symptoms showed no restrictive images in difussion sequences

Conclusion

Reduced cerebral blood flow (CBF) and cerebral blood volume are the most commonly reported findings on perfusion studies in the aura phase of migraine. These perfusion alterations are followed in frequency by prolonged mean transit time (MTT), time to peak (TTP) or Tmax; encompassing more than one vascular territory with an occipital predominance as seen in our patient, even with normal CBF and CBV. Perfusion imaging studies in stroke patients show a more severe increase of MTT, TTP or Tmax, reaching values that are atypical in MA; these findings should raise a suspicion of critical hypoperfusion, as seen in acute ischaemic stroke.

Painful unilateral facial swelling due to superficial temporal artery thrombosis: a rare presentation of Antiphospholipid Syndrome

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INTRODUCTION

Persistent painful unilateral temporal swelling is rarely seen in clinical practice. Antiphospholipid syndrome (APS) is an autoimmune and systemic disorder that causes changes in blood clotting homeostasis, marked by arterial or venous thrombosis, gestational morbidity, and high and persistently positive serum levels of antiphospholipid antibodies (aPL). APS is more common in young women and middle-aged adults, with no preference for race. Among its clinical features, temporal artery thrombosis, associated with headache and temporal and hemifacial edema is extremely rare, with few publications worldwide on this topic.

OBJECTIVES

This report aims to present the case of a unilateral painful facial edema due to thrombosis of the superficial temporal artery as an unprecedented manifestation of APS. Thus, the only record in the English-language literature surveyed in the Pubmed database in July 2022 highlights the rarity of this APS presentation and the consequent challenge in suspecting the correct diagnosis for adequate treatment.

MATERIALS AND METHODS

Case report. Data disclosure was authorized by the patient through an informed consent form.

RESULTS

A 32-year-old woman was presented with pain in the right temporal region of her face. The pain was intense, daily and continuous, pulsating, without irradiation, which worsened with physical activity and presented partial relief with common analgesics. After 20 days, she developed a right pale temporal edema (Figure 1) associated with a significant worsening of pain and intense right unilateral headache attacks triggered by chewing and speaking. She has a history of deep vein thrombosis in the left lower limb. Physical examination and imaging tests showed significant cold edema of the right temporal region with asymmetry of the temporal muscles, which was extremely painful on palpation and made it difficult to open the mouth. There were no other changes in the general physical or neurological examination. During evolution, hypertrophy of the masseter muscles on the right was also noted. She presented erythrocyte sedimentation velocity (ESR) tests with high values, subcutaneous edema in the right temporal region on magnetic resonance imaging (MRI) of the brain (Figure 2), and a biopsy of the right temporal artery revealed a residual histological picture of the previous thrombosis. In the case of suspected hematological disease, serial investigations were performed for aPL markers, which were positive, and for systemic lupus erythematosus, which was negative. Evolved with improvement of edema and pain with the use of indomethacin and low molecular weight heparin.

CONCLUSIONS

This report demonstrates a persistent painful unilateral temporal swelling due to a temporal artery thrombosis resulting from APS. This is a very rare presentation of this condition, highlighting the importance of a high level of clinical suspicion for directing laboratory investigation and appropriate treatment.

KEYWORDS:

Secondary headache disorders, Antiphospholipid syndrome, Antiphospholipid antibodies, Temporal artery thrombosis.

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Figure 1 – Right pale temporal edema.



Figure 2 – Magnetic resonance imaging (MRI) reveals subcutaneous edema in right temporal region.

PSILOCYBIN FOR THE TREATMENT OF CLUSTER HEADACHE, CASE REPORT

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OBJECTIVES

- To describe the clinical case of a patient who used psilocybin for the treatment of cluster headache.
- To describe the modality, dose, efficacy and adverse effects of psilocybin in the patient.
- To carry out a review of the available evidence about this treatment.

CONCLUSIONS – RELEVANCE TO THE FIELD

Cluster headache is considered one of the most intense headaches, with suicidal ideas in many patients. The treatment indicated is that of crises and prevention.

Although there are numerous drugs, none have universal efficacy. (1,2)

It is to prioritize that psilocybin (hallucinogen) is being used by patients with cluster headache who seek advice in international forums.(3) Although the patient had a significant reduction in the frequency and intensity of the crises, the precise dose for the treatment of this entity is not known, so its use may be risky (hypertension, secondary headache and hallucinations) (2,4).

Two phase 1 randomized controlled clinical trials of the use of psilocybin for the treatment of cluster headaches are currently underway and are expected to provide further evidence of its efficacy.(5,6)

This case report provides empirical evidence in favor of the trend towards the use of psilocybin as preventive therapy for cluster headache, given the limited effectiveness of conventional therapy in many of these patients. There is a growing interest regarding the above, which has generated the appearance of new research, which today has provided little quality evidence due to the illegality of the substance and the absence of completed clinical trials that objectively compare the efficacy and safety of psilocybin compared to current best treatments.

CASE DESCRIPTION

Male, 60 years old, smoker.

History of 19 years of evolution of right periorbital headache, intensity 10/10, throbbing, lasting up to two hours with tearing, conjunctival congestion and rhinorrhea ipsilateral to the pain and psychomotor agitation. Presents up to 3 episodes in 24 hours, reporting at least one at night in the first half of it. The evolution has been with asymptomatic periods between three to six months. MRI of normal skull. With episodic cluster headache raised, crisis and preventive treatment is started.

For crises oxygen-therapy MFL 7 to 10 liters per min with improvement. He has received multiple preventive treatments: prednisone 60 mg a day for a week, verapamil up to 480 mg a day, topiramate 100 mg a day, lithium up to 900 mg a day, sometimes in association with melatonin with poor response to them. In the last 6 years he self-indicates psilocybin, with which he becomes aware from the online forum "Clusterbusters". It is used in the form of an infusion from *Psilocybin cubensis* on a monthly basis, at doses of 0.5 to 1.0 g of the active ingredient associated with caffeine.

From the start of treatment, he reports a decrease of more than 50% in the frequency and intensity of the crises, with remission periods of up to 1 year and a half. As an adverse effect with a higher dose than usual, he refers to autoscopic-type hallucinations, on one occasion.

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MIMIC MIGRAINE AS A PRESENTATION OF NEUROCISTICERCOSIS OF THE 4TH VENTRICLE

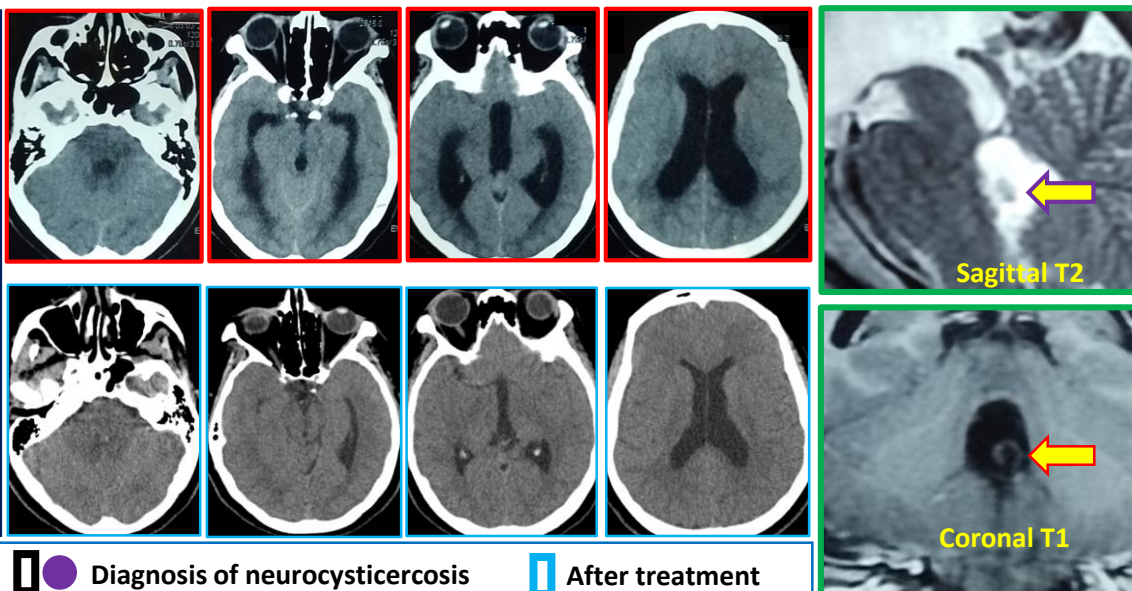
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Introduction and objectives: Neurocysticercosis (NCC) is the most common helminthic disease of the nervous system. It can present with epileptic seizures, focal deficit, cognitive impairment and headaches. The latter usually occur in the context of intracranial hypertension associated with multiple cystic lesions of the brain parenchyma or giant cysts. We present a clinical case of NCC that debuts as mimic migraine.

Material and methods:

A 22-year-old puerperal patient, a native of Bolivia. She presents with throbbing hemicranian headache, with progressive intensity, persistent for a month of evolution. She adds photophobia, sonophobia, nausea and vomiting associated with dizziness and tinnitus. She was refractory to symptomatic treatment.



Before treatment



Diagnosis of neurocysticercosis



After treatment

Absolute criteria (AbsC)	Major criteria (MajC)	Minor criteria (MinC)	Epidemiological criteria (EpiC)	Diagnosis
Histology: visualization of the parasite Neuroimaging: cysts + scolex Fundoscopy: subretinal parasites	Neuroimaging: lesions highly suggestive of NCC Immunological assays: detection of <i>T. solium</i> antibodies Cystocidal drug therapy: lesion resolution	Neuroimaging: lesions suggestive of NCC Clinical manifestations: symptoms suggestive of NCC CSF ELISA: positive detection of <i>T. solium</i> antibodies or antigens Evidence of cysticercosis outside the CNS	Patient's country of origin endemic for NCC Patient currently resides in NCC endemic area Patient frequently travels to endemic areas Patient household has had contact with <i>T. solium</i> infection	Definitive: 1 AbsC OR 2 MajC + 1 MinC/EpiC Probable: 1 MajC + 1 MinC OR 1 MajC + 1MinC + 1 EpiC OR 3 MinC + 1 EpiC

Results: Hydrocephalus is observed in the computed tomography of the brain. Lumbar puncture was performed: cerebrospinal fluid with physicochemical and negative cultures. Serology for cysticercosis: positive. Magnetic resonance imaging of the brain: cystic image with nodular formation inside in topography of the 4th ventricle. It is interpreted as compatible with NCC. Treatment with intravenous corticosteroids and oral albendazole was started, with a favorable clinical response and imaging resolution.

Conclusion: A case with secondary to a NCC headache is presented, mimicking a migraine, fulfilling the IHS criteria for this entity.

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Fighter pilot with incapacitating headache attacks: Dramatic response to galcanezumab on intensity/frequency of migraine attacks, but without affecting prodromal manifestations

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Background

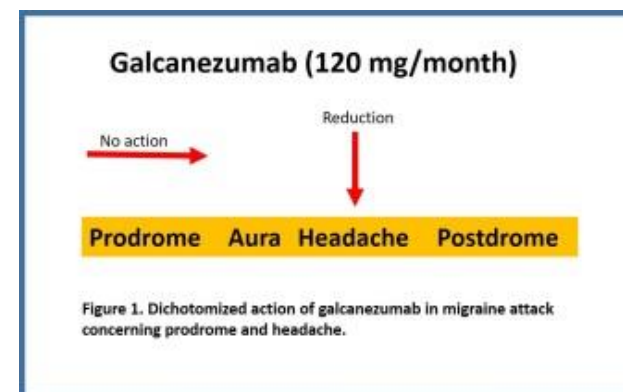
In a migraine attack, we can highlight two phases: (1) the prodromal phase that precedes the pain by hours, and (2) the phase of the classic manifestations of migraine with aura and headache, associated with pathognomonic nausea/vomiting, photo/phonophobia.

Objective

We wish to present a case of a patient with incapacitating migraine attacks (two to three times a week), which are always preceded by marked prodromal manifestations. With treatment using monoclonal antibody anti-CGRP (galcanezumab), there was a drastic improvement in migraine pain crises without affecting prodromal symptoms of hypertonia and cervical-nuchal pain. Thus, there is an apparent dichotomy between the action of galcanezumab on the prodromal phase and the classic painful phase of migraine.

Case description: Caucasian 38-year-old man, airplane pilot, with refractory migraine, with incapacitating migraine attacks (two to three times a week, 5 to 7 sumatriptan tablets a week), reported that his migraines crises started at age 14. One and 6 hours prior to the crises, the patient reported prodromal manifestations, such as pain and hypertonia in the right nuchal region, soreness in the outer corner of the right eye, and a vague feeling of discomfort. On examination: pain in the supraorbital and greater occipital nerves on the right. Because of his profession, he did not tolerate divalproex, amitriptyline, propranolol, and topiramate. Divalproate could not be tolerated due to difficulty in delicate movements and he felt drowsy. Topiramate was not tolerated due to drowsiness and cognitive difficulty. The therapeutic proposal was nerve block and anti-CGRP monoclonal antibody. The patient received as preventive treatment galcanezumab (120 mg/month). Sixty days after the first dose of galcanezumab, he improved substantially, reporting only two less intense crises associated with alcohol consumption and using three sumatriptan tablets in the period.

Furthermore, 150 days later, he used only three tablets of sumatriptan in a 90-day interval. Stressful situations no longer trigger seizures. On the third return to the outpatient clinic after 270 days, he mentioned almost no headache crises. He reports that triggering situations such as stress or intense light sometimes cause pain and stiffness in the cervical muscles and a feeling of discomfort, but the crisis does not develop beyond that (Figure 1).



Conclusion

We describe the action of an anti-CGRP antibody in a patient who works as a fighter pilot, a profession that demands great cognitive activity and motor skills. This class of drugs has a preventive action on migraine without altering cognitive functions, including attention and motor performance. The treatment showed a dichotomized action on the phases of migraine - acting essentially on headache attacks without affecting prodromal manifestations.