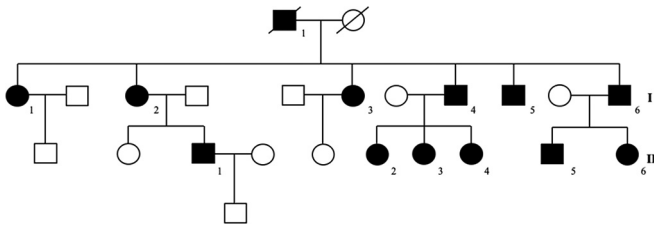




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attention deficit will have a bigger difficulty both in the performance and in the learning process too. This predisposes to anxiety disorders, depression .

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Transcranial doppler parameters and vasomotor reactivity in people with migraine versus people with idiopathic intracranial hypertension and normal controls: A comparative prospective study

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Background and aims

Headache is the most common presentation in neurology and role of transcranial doppler (TCD) in headache disorders specially migraine and Idiopathic intracranial hypertension (IIH) has not been explored in the past. The present study was planned to decipher the role of TCD to assess the status of flow dynamics in the vessels, which may help in deciding appropriate therapeutic options in headache disorders.

Methods

This prospective study was carried out at a tertiary care institute in North India and included 51 people with IIH (fulfilling Modified dandy criteria), 87 with migraine (diagnosed as per ICHD 3), and 101 healthy controls. All patients and controls were subjected for transcranial doppler study including vasomotor reactivity.

Results

Mean age of patients in IIH was 33.41 years, in migraine was 34.6 years and in control group was 31.17 years. Vision loss was present in 66.67% patients of IIH. Neuroimaging was abnormal in 94.11% patients of IIH with mean CSF pressure of 31.27 ± 5.32 cm. Mean VMR in IIH (1.11 ± 0.32) was lower than mean VMR in migraine (1.34 ± 0.43) and controls ($1.49 \pm 0.46\%$) suggesting different patho-physiological mechanisms in them. Statistically significant difference between MCA mean flow velocity (MFV) and end diastolic velocity (EDV) was present when compared between IIH, migraine and controls. With increasing CSF pressure, pulsatility index showed a positive correlation (p value = 0.045).

Conclusions

TCD derived MCA flow velocities and indices differ considerably between IIH, migraine and controls and may be utilized in these patients to explain the pathogenetic mechanisms and clinical picture. More-over pulsatility index may be useful for non-invasive monitoring of raised ICP.

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Effects of COVID-19 on a migrainous patient treated with erenumab: A case report

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	Sex	Headache types IHS criteria	Age	Age of onset (years)	Frequency of the episodes (per month)	Duration (hours)	Triggers	Psychiatric disorders	Prophylactic Treatment
I-1	F	HM	76	24	3	0.5-4	Stress	Yes	-
I-2	F	HM	63	18	2	3-700	Pregnancy	Yes	-
I-3	F	HM	75	15	3	0.5-168	Menstruations	Yes	Amitriptyline
I-4	M	HM	68	12	1	4-96	Mild head trauma	-	-
I-5	M	HM	71	6	0	3-168	Stress, bright lights	Yes	Acetazolamide + Lamotrigine
I-6	M	HM	66	6	2	3-168	-	Yes	Pregabalin
II-1	M	ETTH	45	15	0	1-48	-	-	-
II-2	F	MO	29	20	1	0.5-6	Stress, sleep	-	-
II-3	F	HM	24	14	1	12-72	Sleep deprivation, physical exertion	-	-
II-4	F	HM	31	16	3	0.5-48	Menstruations	-	-
II-5	M	HM	35	15	2	0.5-48	-	-	-
II-6	F	HM	22	12	3	1-72	Alcohol intake, menstruations	-	Pregabalin
n	5	M						5	4
mean			50,42	14,42	1,75				
SD			21,32	5,16	1,14				

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Can headache be considered an altered function of attentive process?

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Background and aims

In this study we want to analyse the role played by cognitive evoked potentials in individuals suffering from headache vs. non-cephalalgic subjects. Using as differential variables the amplitude and latency values of the visual and auditory P300 recorded in the FZ CZ PZ derivations,

Methods

All enrolled subjects arrived at my outclinic for a neurological evaluation and as usual they underwent a series of evaluations to highlight whether the headache was attributable to some organic factor 44 subjects with headache: 10 males and 34 females aged 18 to 65 years The control group had no history of headache, 13 subjects: 4 males and 9 females . All subjects were subjected to a preliminary EEG with open eyes and closed eyes to highlight the presence of irritative phenomena. Registration of ERP, the paradigm used is ODDBALL.

Results

The values of the amplitudes in the FZ CZ PZ derivations of the controls vs. headache group it is evident that in all 3 derivations the difference in amplitude is significantly different between normal and headache both for the visual P300 and for the auditory P300.

Conclusions

the results obtained from this study, say that attention deficit is present in the subjects affected by headache and that could influence in a statistically significant matter their schooling and as a consequence their quality of life as well. Thus, the subjects with an

Background and aims

Headache is a frequent symptom of the novel coronavirus 19 disease (COVID-19). Two distinct headache phenotypes were observed in COVID-19 patients: one showing the features of migraine attacks while another characterized by symptoms of tension-type headache. We report the effects of SARS-CoV-2 infection on a chronic migraine patient treated with erenumab.

Methods

A 47 years old patient suffering of chronic migraine started, in September 2020, an anti-CGRP receptor monoclonal antibody therapy with Erenumab, at the dosage of 70 mg per month. In a two-months period, headache frequency decreased from 16 to 5 attacks per month. On the third month the patient developed mild COVID-19 symptoms, like fatigue and hyposmia, with nasopharyngeal swab-test resulting positive for SARS-Cov-2 RNA. A significant increase in migraine attacks (15 per months) was reported. Brain MRI and EEG were performed, resulting normal. Erenumab was increased to 140 mg/month.

Results

After increase in anti-CGRP dosage, the frequency of migraine attacks progressively decreased to 3–4 per month and remained stable. All the headaches experienced by our patient during the infection fulfilled the criteria of the migraine attacks, without tensile like features.

Conclusions

Our case report suggests that inflammatory processes induced by SARS-CoV-2 infection may increase the frequency of migraine attacks through an activation of the trigeminovascular system. Additional studies with anti-CGRP monoclonal antibodies in COVID-19 patients are needed.

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Transcranial doppler ultrasonography study in migraine patients treated with erenumab

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Background and aims

Pathogenesis of migraine is believed to be neurogenic, with vascular changes having a role in the attack pathophysiology. Migraine patients have reported abnormalities in cerebral hemodynamics. Human monoclonal antibodies represent the new therapy of migraine, acting against the vasodilator effect of Calcitonin gene-related peptide. In this frame, the aim of the present study was to evaluate blood flow velocities in basal brain arteries and vasomotor reactivity of migraine patients using TCCD, before and after monoclonal antibody treatment with erenumab.

Methods

11 patients with migraine without aura treated with erenumab were age-matched with 11 healthy controls. Peak Systolic Blood Flow Velocity (PSV), End-Diastolic Blood Flow Velocity (EDV), Mean Blood Flow Velocity (MBFV), Pulsatility Index (PI), and Resistivity Index (RI) were recorded from the Middle Cerebral Artery (MCA)

bilaterally and Basilar Artery (BA). Cerebrovascular reactivity to breath-holding was also evaluated. Patients were evaluated at baseline, after 6 months from the first erenumab injection and after one year of treatment.

Results

A significant difference was observed in MBFV and PSV of the MCA in patients after one year of treatment with erenumab. In particular, patients exhibited a decrease in MBFV ($p = 0.009$) and PSV ($p = 0.020$) compared to controls.

Conclusions

Cerebral hemodynamics are partially changed in migraine patients after a long period of treatment with erenumab.

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Retrospective analysis of adult chronic post-traumatic headache with respect to the intracranial pressure and the characteristic of headache

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Background and aims

Chronic post-traumatic headache (CPTH) is a life disturbing disorder with many symptoms (JAMA 2008; 300: 71–9) and yet the characteristic of the headache is still unclear. We have reported the possibility of increased intracranial pressure (ICP) in adult CPTH (Eur J Med Res 2007; 12: 246–54). The main purpose of this study is to elucidate the intracranial pressure (ICP) and the characteristic of the headache.

Methods

We retrospectively investigated 150 adult patients (≥ 20 years) with CPTH over 3 months. ICP was measured by lumbar spinal tap in all patients. Data were shown in mean (SD). Statistically significant level was set $p < 0.05$.

Results

Mean age was 42.1 (13.5) years (40.7 (11.1) years for male ($n = 58$) and 43.0 (14.8) years for female ($n = 92$), $p = 0.318$). Mean ICP was 151.2(44.9) mmH₂O (167.1 (44.5) mmH₂O for male and 141.2 (42.6) mmH₂O for female $p < 0.001$). Disease period was 68.1 (101) months. One hundred and thirty-two patients had headache with orthostatic nature and 116 patients complained deterioration of the headache by low atmospheric pressure. Thirty-one patients complained whole body pain similar to fibromyalgia. Removal of cerebrospinal fluid (CSF) was effective to relieve symptoms in 77 patients.

Conclusions

Although many patients with CPTH complained headache with orthostatic nature suggesting low ICP, their ICP was normal or even high. Female ICP was significantly lower than male ICP. CSF removal was effective in many patients. The results of this study indicates the involvement of CSF abnormality in CPTH.

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