Original Research Article

A study on migraine in tertiary care centre at Dharmapuri district

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Abstract

Introduction: Migraine is a syndrome of recurrent headaches which commonly affects the most productive age group. The clinical presentation of a migraine varies is from the patient. The drug treatment needs to be selected by grouping into different categories based on the clinical profile. In this study, an attempt has been made to study the clinical spectrum EEG changes and therapeutic response in patients with a migraine.

Aim of the study: To study the clinical spectrum of a migraine, to study the EEG changes in migraine patient, to assess the therapeutic response in patients treated with prophylactic drugs.

Materials and methods: In this study, patient with age between 12 years and 60 years who attended the headache clinic and satisfied the international headache society criteria for a migraine included the patients were evaluated in the following way: Detailed History taking, Physical examinations, laboratory investigations.

Results: In the present study, most of the patients were in the age group of 30 to 35 years in both migraine with aura (MA) and migraine without aura (MO) (MA 48% and MO 52%). The minimum age in this study was 14 years maximum age was 54 and the mean age was 33.2. Prevalence of a migraine varies with age peaking between age of 30 to 45 years. Overall prevalence was highest from 25 to 55 years of being productive age. The family history of a migraine was present in 32% of the total patients (MA 62% to 32%) seen predominantly in first degree relatives. The present rating factors were found in 76% of patients in the study group. Stress was commonest precipitating factor for migraine (MA 33%, MO 50%). Other precipitating factors were menses (MA 17%, MO 20%) hunger (MA 17%, MO 15%), sleep deprivation (MA17%, MO15%), food (MA 5%), head trauma (MA11%). In this study group, 61 patients had followed up for more than 3 months. Among them, 26 patients 42.6% were treated with three propranolol 33 patients 54% were treated which combination

of Beta blocker and amitriptyline and 2 patients 3.2%were treated with sodium valproate. At the end of 3 months, response to therapy was assessed by MIDAS score.

Conclusion: Prodrome symptoms were present in 38% of patients and postdrome symptoms were present 50% of the patients. Visual Aura was the commonest aura. A headache was predominantly unilateral 72% pulsatile 95% moderate-to-severe intensity of pain 83% with the main duration of 16.5 hours. Nausea and vomiting were commonest associated symptoms. Stress was a commonest precipitating factor.

Key words

Migraine, Headache, Stress, EEG, Neurological symptoms.

Introduction

A headache is one of the most common complaints encounters by the physician in the day today practice the international headache society classified into primary headaches and secondary headache [1]. Approximately 90% of a headache was seen in clinical settings are primary headaches in which clinical examination and investigations or normal but the patients continue to suffer [2]. Migraine is common and important primary headache. It is also a common cause of temporary disability. A migraine is a syndrome of episode 1 recurrent headaches which commonly affects the most productive age group [3]. The clinical presentation of a migraine varies is from patient. The drug treatment needs to be selected by grouping into different categories based on the clinical profile. In this study, an attempt has been made to study the clinical spectrum EEG changes and therapeutic response in patients with a migraine [4]. Estimates of migraine prevalence vary from less than 1% 2 more than 25% of total population. A migraine occurs in 18% of women six percent of men and 4% of children in the US. This disorder usually begins in first three decades of the life with prevalence peaking in the 5th decade [5]. Approximately 80% other patients with a migraine have a migraine without aura and 15% to 20% have a migraine with Aura [6]. The United States among the females, Caucasians have more migraine (20.41%) then African American (16.2%) with patients having the least prevalence of a migraine (9.2%) this may indicate a genetic component [7]. Most migraineurs have your family history there was a significant preponderance of females. Contrary to the finding of clinically based studies population-based studies have shown a migraine to be more prevalent in female families of lower socioeconomic class [8]. In addition, the economic impact of a migraine another headache is enormous. The annual cost of a headache in terms of absenteeism decrease productivity and the cost of Diagnostic tests and treatment ranges from 5 to 17 billion dollars [9]. Impact of headache disorders on individuals and on society is a large and provides an important target for public health intervention [10]. According to the American migraine study, there are 23 million people in the US with a severe migraine headache. 25% of the women experience for 4 or more severe attacks per month and 40% experience 1 or less than 1 severe attack per month. More than 85% of women and more than 82% of men with a severe headache had some headache-related disability. About 1 third were severely disabled or needed bed rest during the attack [11]. Many migraineurs live in fear knowing that attack will disrupt their families how to meet social obligations. The health-related quality of life measurements has shown that compared with such other chronic illness as HT, DM, CAD. A migraine has low scores in physical functioning role functioning body pain and other health aspects [12].

Materials and methods

The study was conducted in General Medical Out Patient Department of Dharmapuri medical college. from December 2017 to January 2018.

Inclusion criteria: Patients with the age between 12 years and 60 years. Patients presented with a primary headache who had satisfied International headache society criteria for a migraine.

Exclusion criteria: Patients with a primary headache who had not satisfied International headache society criteria. Patients with clinical and laboratory evidence of secondary headaches.

In this study patient with age between 12 years and 60 years who attended the headache Clinic and satisfied the international headache society criteria for a migraine included the patients were evaluated in the following way: Detailed History taking, Physical examinations, Laboratory investigations. The details were collected in proforma. Hematology investigations like TC, hemoglobin, PCV, peripheral smear, Biochemistry investigations like sugar, urea, creatinine, ECG, X-rays cervical spine, X-ray PNS, CT Scan brain, CT PNS were done. In this study diagnosis of migraine was made as per the international headache society criteria for migraine.

Results

The Study group included 100 patients of which 42 patients had a migraine with aura and 52 patients were found to have a migraine without Aura (**Table – 1 to 8**).

Table – 1: Age distribution of the patients with migraine.

Age Group (Years)	Migraine with Aura (N-42)			Migraine without Aura (N-58)		
	No	%	Mean (Y)	No	%	Mean (Y)
12-19	2	5	16	2	4	19
20-29	10	23	25	8	14	25
30-39	20	48	34	30	52	33
40-49	8	19	41	16	28	43
>_50	2	5	53	2	3	53

Table – 2: Sex ratio of patients with a migraine.

Sex	Migraine with aura (n=42)	Migraine without aura (n=58)	Total
Male	8	6	14
Female	34	52	86
Male Female ratio	1:4	1:8	1:6

Table – 3: Clinical features of the various phases of the migraine attack in this study group.

Category	Prodrome	Aura	Headache	Postdrome
Migraine with aura (n-42)	26(68.4%)	42	42	20(40%)
migraine without aura (n-58)	12(31.6%)	-	58	30(60%)
Total	38	42	100	50

Table – 4: Various types of Aura in the patient with a migraine.

	Visual aura				
	Fortifications spectra	Spot	Colors and line	Sensory	Motor
Male (n-8)	2	4	0	1	1
Female (n-34)	5	15	6	8	-
Total	7	19	6	9	1

Discussion

In this study of 100 patients, 42 patients were found to have a migraine with aura and 58 patients were found to have a migraine without aura. In the present study, most of the patients were in the age group of 30 to 35 years in both MA and MO (MA 48%, MO 52%) [13]. The minimum age in this study was 14 years

maximum age was 54 and the mean age was 33.2. In the study of Lipton, et al., prevalence of a migraine varies with age peaking between the age of 30 to 45 years. Overall prevalence is highest from 25 to 55 years of being productive age. Thus our study is consistent with other studies regarding the age distribution. In this study, females were prominently affected in both the groups. The overall male-female ratio was 1: 6 (MA 1:4, MO1:8) [14]. In the study of Richard B Lipton, at al., the male-female ratio at the age, 20 is about 1: 2. The ratio peaks between 42 and 44 years with the ratio of 1: 3 thereafter it decreases but female preponderance persists throughout adulthood. So the prevalence of a migraine in women increases during the years of Mensuration peaks before the age of Menopause and then decline [15]. In our study also female preponderance is same but with higher percentage familial occurrence Family history of migraine was present in 32% of the total patients (MA 62% to 32%) seen predominantly in first degree relatives.

Table – 5: Site, mode and associated symptoms among patients.

		Migraine with aura (n-42)	Migraine without Aura (n-58)	Total
Location	Unilateral	32(76%)	40(69%)	72
	bilateral	10(24%)	18(31%)	28
quality	pulsatile	40(95%)	56((97%)	96
	non pulsatile	2(5%)	2(3%)	4
intensity	mod to severe	33(79%)	50(86%)	83
	mild	9(21%)	8(14%)	17
duration	hours	15	18	

Associated symptoms	Migraine with Aura	Migraine without Aura
Nausea and vomiting	35(83%)	45(78%)
photophobia and phonophobia	7(17%)	13(22%)

Table – 6: Pre-treatment MIDAS score.

Category	Grade1	Grade2	Grade3	Grade4
Migraine with aura n-42 (100)	7(16.7%)	112(26.2%)	15(35.7%)	9(21.4%)
migraine without aura n-58 (100)	8(13.8%)	24(141.4%)	22(37.9%)	4(6.9%)
Total	16	36	48	14

Table – 7: Treatment and follow up details.

Category	No. of patients follow up (%)	Prophylactic treatment is given			Response to therapy after 3 months (MIDAS score)		
		PP	PP+AM	Valp	Imp	Static	Worsen
Migraine with aura (n-42)	22(100%)	9(40.9%)	11(50%)	2(9.1%)	14(63.6%)	6(27.3%)	2(9.1%)
migraine without aura (n-58)	39(100%)	17(43.5%)	22(56.5%)	-	28(71.7%)	8(20.5%)	3(7.6%)
Total	61(100%)	26(42.6%)	33(54%)	2(3.2%)	42(68.8%)	14(22.9%)	5(8.1%)

Table – 8: EEG changes in migraine patients with aura.

No of patient EEG performed	Abnormal	Normal
32	5(16%)	27(84%)

Cologno, et al. showed the familial recurrence of migraine with aura are found in 7 patient 30% out of 26 total patients [16]. The relative risk of a migraine with aura in first degree relatives of the subjects was 3.8 (4.16 for women 2.74 for men) Ninan T. Mathew, et al. showed approximately 70% of the patients with a migraine give you a positive family history.

In our study unilateral headache was common 72% in both groups (ma 46% to 69%) more than 95% of the patient had a pulsatile quality headache the intensity of the pain was moderate to severe in 83% other patients ('m a 79% to 86%) making the patients disabled and bedridden the mean duration of a headache was 16.5 hours (MA 15 hours MO 18 hours) [17]. In American migraine study 2 about one third of the patient reported that a headache was extremely Severe, another 45% described the pain was severe .the quality of pain was pulsatile in 85% of the patients and unilateral in a 59% the patients over the three months period 22% experienced 10 or more days with a severe headache, 19% had 5 to 9 days nearly half had 1 to 4 days a headache interfered with work and or daily activities in 92% of the patients [18]. The severe disability or need for bed rest was seen in 53% other patients. In our study nausea and vomiting were commonest associated symptoms in both MA and MO (MA 83% to 78%). The other symptoms found in our study were photophobia and phonophobia MA17% MO22%). In the American migraine study migraine was associated with following symptoms photophobia and phonophobia (70%) nausea (73%) and aura 36% [19]. The present rating factors were found in 76% of patients in the study group. Stress was commonest precipitating factor for migraine m a 33%PMO 50%. In the study of Lerusalimschy R, et al. stress was most cited Trigger triggering migraine in 72% in descending order of frequency others were cited sensorial stimuli 75%, sleep deprivation and hunger 48%, environmental factor 47%, food 46%, menses 39%, fatigue 35%, alcohol 28%, sleep excess 27%, physical exertion 20%, trauma 20%, trips 4%, sexual activity 2% [20]. EEG

abnormalities were found in 16% of the patients all of them had Aura. The EEG abnormalities noted was slowing of alpha Rhythm and asymmetry. In the study by Timo Nyrke, et al. 18 patients with a classical migraine with Aura were studied in the asymptomatic period. Increase frequency dispersion and frequency asymmetries of Alpha rhythm were found. The abnormalities increased significantly before the onset of prodromal symptoms and outlasted the headache phase [21]. In this study group, 61 patients had followed up for more than 3 months. Among them, 26 patients 42.6% were treated with three propranolol 33 patients 54% were treated which combination of Beta blocker and amitriptyline and 2 patients 3.2% were treated with sodium valproate. At the end of 3 months, response to therapy was assessed by MIDAS score. At the end of 3 months, follow-up 72% of patients improved 8% of patients worsen and 20% of patients had the same pretreatment MIDAS score [22].

Conclusion

42% of patients had a migraine with aura and 58% of patients had a migraine without Aura Mossad operations were in the age group of 30 to 39 years with the mean age of 33.2 years. Females were affected more commonly than males with the male-female ratio of 1: 6 family history of a migraine was the person in 32% of patients. Prodrome symptoms were present in 38% of patients and postdrome symptoms were present 50% of the patients. Visual Aura was the commonest aura. A headache was predominantly unilateral 72% pulsatile 95% moderate-to-severe intensity of pain 83% with the main duration of 16.5 hours. Nausea and vomiting were commonest associated symptoms. Stress was a commonest precipitating factor.

In MIDAS grade distribution, most of the patients where in grade 3. EEG abnormalities were found in 16% of patients with a migraine with aura. The most common abnormality found was slowing of Alpha rhythm and asymmetry. In the patients treated with prophylactic therapy at

the end of the three months follow up, 72% of patients improved, 8% of patients worsen and 20% of patients had the same pretreatment MIDAS score.

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