Original Article

Old patient migraine in comparrision with younger adult migrain

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Abstract:

Background: Migraine is a common chronic episodic disabling primary headache disorder. Migraine can affect all age groups elderly and young age with different presentation of symptoms between two age groups. The prevelance of migraine is highest between 20 and 55 years peaking at age around 40 years of age and the declines thereafter, however the primary headache disorder does also exist in older population.

Objective: This study was undertaken in order to find out the differences in the characteristics of migraine headache between elderly and young for easy diagnosis and treatment.

Patient and Method: We retrospectively assessed subjects seen from March 2010 to October 2010 in Baghdad Teaching Hospital neurology out-patient clinic. We applied a questionnaire based the criteria of episodic migraine headache (with and without aura) according to the international Classification of headache disorder; we elect 50 migrainous patients with age < 50 years old and compare them with other 50 migrainous patients > 50 years old..

Results: headache was more unilateral in the young group (84%) compared with (52%) in older patients (p=0.001). Throbbing headache and disability had been reported less in old group than in young .Pain aggravation with activity was significant more in the young group (p=0.004), the duration of pain was less in the elderly .The number of attacks also less in general when compared with the young. The presence of aura in the older group (12%) versus (24%) in young. Photophobia and phonophobia were less in elderly (P<0.0001), (P<0.0001) respectively. While nausea, diarrhea, rhinorrhoea, tearing eyes were more in older group than young. Vomiting (P=0.025) and sleeping late (as a triggering factor) (P=0.017) were more prominent features in young than older group.

Conclusion: The study showed a decrease of most features in the above 50 years old group whether the differences are significant like (unilateral site of pain ,aggravation with activity, Sleeping late, Photophobia, Phonophobia, Vomiting) and no statistical significant differences like (nausea , tiredness, hungry, uncomfortable sleep, food and need rest).

Key words: Migraine, elderly patient, Younger patient

Fac Med Baghdad 2015; Vol.57, No.2
Received: Nov., 2014
Accepted:March,2015

Introduction:

Migraine is a common chronic episodic disabling primary headache disorder. Episodic attacks of headache are the hallmark symptom of migraine headache with associated Symptoms (autonomic nervous system dysfunction, and in some patients. an aura involving neurologic symptom) (1, 2, 3).

According to the international Classification of headache disorder-second edition (4), the headache of migraine can be divided into two major subtypes :migraine without aura , a clinical syndrome characterized by headache with specific features and associated symptoms (4,5); and Migraine with aura which is primarily characterized by focal neurological symptoms that usually precede or sometimes accompany the headache. Some patients also experience a premonitory phase, occurring hours or days before the headache,which includes hyperactivity, depression , irritability, fatigue, craving for particular foods, constipation or diarrhea, sensitivity to smells or noise, repetitive yawing and other less typical symptoms reported by some patients (6,7).

Whilst migraine begins to resolve in the 5th and 6th decades of life in around 40% of sufferers, it is still a common complaint in the elderly(8) New onset of migraine above the age of 50 years is not rare. A Scandinavian epidemiological study, found that 19% of women with migraine without aura (MoA) had an age at onset of over 50 years(9). The primary headache disorders including migraine may either attenuated over time (reduced frequency, severity and /or duration) or present in an atypical manner (10)

This study was undertaken in order to find out the difference in the characteristics of migraine headache between patients

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more than fifty years old patients and the younger age group adult to facilitate in diagnosis and treatment.

Patients and methods:

We retrospectively assessed subjects seen from March 2010 to October 2010 in Baghdad Teaching Hospital neurology out-patient clinic, 100 patients (males 36; females 64) 50 patients above 50 years age with new onset migraine headache with normal examination ,neuroimaging and exclusion of other headache causes other 50 patients below 50 years with migraine headache attending the neurology clinic. All of them met the criteria of episodic migraine headache (with &without aura) according to the international Classification of headache disorder , We applied a questionnaire based the criteria of episodic migraine headache (with and without aura) according to the international Classification of headache disorder. By using the history, as a cross section observational study

The study compared between the two age groups in the following variables : the lateralization of headache (unilateral, bilateral) , throbbing, disability, aggravation with activity, duration of the attack (untreated and unsuccessfully treated) in hours- we divided the patients into 3 groups (duration lasting Less than 24 hours, 24-48hours ,48-72hours), frequency\month (less than one, 1-2,more than 3 but less than 15\month) in order to exclude falling in the criteria of chronic migraine, presence or the absence of aura (regardless the type),photophobia, phonophobia, nausea, vomiting, diarrhea, rhinorria ,tearing eyes, triggering factors (tiredness ,hungry, sleep) ,decreasing factors (rest, staying in dark room) and severity of the migraine headache according to (Migraine Disability Assessment) MIDAS questionnaire.

Statistical analysis:

Statistical analysis was performed with the SPSS 16 statistical software program (SPSS Inc. Chicago, IL, USA). Unvaried data were summarized using standard descriptive statistics, tabulation of categorical variables and histograms of numerical variables. Associations between categorical variables were assessed via cross tabulation and chi-square. Exact tests were used to calculate the p value. In all statistical analyses, a p value < 0.05 was considered to be significant

Results:

Regarding the gender there is no statistical significant difference between the age groups. As for the site of the migraine headache we found that it was more bilateral in the elderly (48.0%)vs.(16.0%) in young group (P=0.001), while it was more unilateral in the young group (84%) versus.(52%) in elderly patients (also p=0.001),(table 1).

Throbbing migraine headache (90% old vs 96% young) .Disability had reported less effect in the old group(74%) than young (84%)but with no significant statistical difference while regarding pain aggravated with activity the difference was significant between young(66%) and Older group(46%)-(p=0.004). The presence of aura in the older group (12%) versus (24%) in young (table 1).

The duration of attacks (Table2), duration of attack of 4-24hours was more in the older in compared to young 78% versus 60% , While duration of attack lasting 4-24 hours showing more in the young group (24%)than old(12%). the attacks lasting 48 to 72 hours was 16% in young versus 10% in old with no statistical significance.

The migraine frequency is less in older age when compared with the young group; attack equal /or less than one per month was (36% in young versus 28% in older age group) p value < 0.05.

Regarding the associated symptoms, we found significant differences between the two groups regarding Photophobia (40% in old vs 97% in young) (P<0.0001), phonophobia (40% in old vs 92% in young), (P<0.0001) ,vomiting (30% in old vs 54% in young),(p=0.025)were much less in older group . While nausea (74% in old vs 86% in young) also less in older group than young but with no significant. (Table 3).

Diarrhoea (12% old versus 8% young), rhinorrhoea (26% in old versus 16 in young), tearing eyes (28% in old 14% in young) were more in older group than young but with no statically significant differences.

Regarding triggering factors;sleeping late was more prominent and significant features in young than older age group (4% in old vs 14% in young group) (P=0.017) . While tiredness (44% in old vs 46% in young), hungry (22% in old vs 32% in young), uncomfortable sleep with frequent awakenings(18% in old vs 22% in young) and food (30% in old vs 40% in young) all were with no significant differences while regarding reliving factors the results were: Rest preference (40% in old vs 56% in young) was less in older age patients but with no significant differences. But staying in dark (34% old vs 28% young)were shown as more in elderly than young group but with no significant statically differences.

Table1. Showing the Clinical features of migraine according to age groups

Clinical features	Age groups						Significance (p value)
	Equal or more than 50 years			Less than 50 years			
	Present	Absent	Total	Present	Absent	Total	
Bilateral headache	24 48 %	26 52 %	50 100 %	8 16 %	42 84 %	50 100 %	0.001
Unilateral headache	26 52 %	24 48 %	50 100 %	42 84 %	8 16 %	50 100 %	0.001
Throbbing headache	45 90 %	5 10 %	50 100 %	48 96 %	2 4 %	50 100 %	N.S.
Headache with disability	37 74 %	13 26 %	50 100 %	42 84 %	8 16 %	50 100 %	N.S.
Headache aggravated by activity	23 46 %	27 54 %	50 100 %	33 66 %	17 34 %	50 100 %	0.044
Migraine attacks with aura	6 12 %	44 88 %	50 100 %	12 24 %	38 76 %	50 100 %	N.S.
Migraine attacks without aura	44 88 %	6 12 %	50 100 %	38 76 %	12 24 %	50 100 %	N.S.

Significant p value < 0.05, N.S.: not significant

Table2. Showing the duration of attacks of according to age groups

Duration of attack lasting between	Equal or more than 50 years			Less than 50 years			Significance (p value)
	Present	Absent	Total	Present	Absent	Total	
(4-24) hours	39 78 %	11 22 %	50 100 %	30 60 %	20 40 %	50 100 %	N.S.
(24-48) hours	6 12 %	44 88 %	50 100 %	12 24 %	38 76 %	50 100 %	N.S.
(48-72) hours	5 10 %	45 90 %	50 100 %	8 16 %	42 84 %	50 100 %	N.S.

Significant p value < 0.05, N.S.: not significant

Table 3. Associated symptoms according to age groups

Associated symptoms	Age groups						Significance (p value)
	Equal or more than 50 years			Less than 50 years			
	Present	Absent	Total	Present	Absent	Total	
Photophobia	20 40 %	30 60 %	50 100 %	47 94 %	3 6 %	50 100 %	< 0.0001
Phonophobia	20 40 %	30 60 %	50 100 %	46 92 %	4 8 %	50 100 %	< 0.0001
Nausea	37 74 %	13 26 %	50 100 %	43 86 %	7 14 %	50 100 %	N.S.
Vomiting	15 30 %	35 70 %	50 100 %	27 54 %	23 46 %	50 100 %	0.025
Diarrhea	6 12 %	44 88 %	50 100 %	4 8 %	46 92 %	50 100 %	N.S.
Rhinorrhoea	13 26 %	37 74 %	50 100 %	8 16 %	42 84 %	50 100 %	N.S.
Tearing eye	14 28 %	36 72 %	50 100 %	7 14 %	43 86 %	50 100 %	N.S.

Significant p value < 0.05, N.S.: not significant

Discussion:

Current study showed less frequencies of the most features in old group migraine patient . Just around 2% of the patient report the onset of migraine after age of 50, and studies consistently show a decrease in migraine prevalence after peaking around the 40s. (11). There are many studies concerning with alteration of the course of migraine in relation with progression of age . a 40-year follow-up study of 73 children with "pronounced" migraine over 40 years and concluded that 23% were migraine-free by age 25 and less than half by age 50 years; 30% had migraine throughout the period of the study. (12) Remission of migraine has been reported in

34%,(13), 33%,(14) 26%,(15) , 28%(16) and 22%(17) in studies ranging in time from 7 years to 25 years. A study of 229 migraineurs attending a clinic from age 40 years onwards, it was estimated that the lifetime prevalence was 31.5% and that active migraine (1 attack or more in the previous year) declined at the rate of 50% per decade. (18) 12-year follow-up in 64 patients showed remission of migraine in 42%, low migraine frequency in 38%, and higher frequency migraine in 20%. (19) In a study of 92 migraine patients for up to 15 to 20 years, one third remitted and improvement occurred in two thirds. (20) A study of 260 patients showed that, with increasing age, statistically longer duration of headaches, more throbbing, photophobia, and phonophobia were seen. (21) Conversely, a study of 1009 patient showed no difference in duration of headaches and showed a decrease in frequency of photophobia and phonophobia with increasing age. No significant age differences were seen in gender, aura . In the same study patients with aura the percentage of headaches with aura significantly decreased with age. Headache triggers, in general, showed no age differences; specific triggers showed statistical differences: stress as a trigger decreased with age; alcohol, smoke, and neck pain triggers increased with age, while in women hormones as a trigger peaked markedly in the 30- to 49-year-old age group compared with the other ages. Exercise, food, fasting, heat, lights, perfume, sleep disturbance, sleeping late, and weather triggers showed no significant differences in age. The above 50 age group in the study tended to have less dizziness, photophobia, phonophobia, nausea, vomiting, temporal location, throbbing, pressure, stabbing, headache days, moderate days, severe days, aggravation of headache by activity, and recurrence but tended to have more mild days, greater ability to function during headache, and greatest response to acute medication. Despite the above 50 age group showing no difference from other age groups in headache intensity and duration of headache, the above findings taken together seem to reflect a "lesser migraine attack" in the above 50 age group. (22)

Danish cross-sectional headache study (1989) examined 64 migraineurs (aged 25 to 64 years) at baseline, 42% had experienced remission, 38% had low migraine frequency, and 20% had more than 14 migraine days per year at follow-up. Poor outcome was associated with high migraine frequency at baseline and age at onset younger than 20 years (23). About the Clinical features of migraine by age. In regard to the pain features, the proportion of subjects reporting that most of their attacks were throbbing declined in every age range from those 18 through 29 to those older than 70 (65.7%). With use of the age of 18 to 29 as a reference, although 83% of this group had throbbing pain, 79.1% of those from ages 40 to 49. Being worsened by physical activities happened in 58% of those ages 18 to 29, 60.5% of those ages 30 to 39 , 59.1% of those ages 40 to 49 (non-significant), and then declined for just 36% of those age 70 or older. Finally, for unilateral pain, 60% of ages 18 to 29 had it compared with 67% in those ages 50 to 59 and 53% in age 70 or older. For the associated symptoms, no clear trend for nausea in regard to age was observed. The proportion of subjects reporting phonophobia in most attacks, however, clearly diminished with age. Whereas 77% of those ages 18 to 29 and 30 to 39 had it, just 67% of those ages 60 to 69 and 68% of those age 70 or older had photophopia. For photophobia, there was also a significant inverse trend in regard to age, although less pronounced than for phonophobia and not significant. Finally, as expected, the proportion of subjects with aura increased by every single age range, from a low of 13.2% from ages 18 to 29, to 15.2% in those ages 30 to 39 , 20.1% in those ages 40 to 49 , 25.2% in those ages 50 to 59 , 31.6% in those ages 60 to 69 , and a high of 41% in those age 70 or older . the frequency of migraine attack this study assessed the proportion of migraineurs who had from 10 to 14 headaches days per month (not necessarily migraine days) as a function of age and found a direct relationship Whereas 12.5% of those ages 18 to 29 had 10 to 14 days of headache per month, the proportion was significantly higher in every other age range. Attacks tend to be more typical in the younger subjects than in the elderly. A higher proportion of young individuals have the hallmarks of migraine, such as unilateral pain, pain aggravated by exercise, and photo- and phonophobia. As expected, aura shows the opposite pattern and is more common with age. The proportion of subjects with frequent headache days (10 to 14 days of headache per month) increased with age. (24) Leslie et al study showed that sleep complaints were common and associated with headache in a sizeable proportion of patients. Over half of migraineurs reported difficulty initiating and maintaining sleep at least occasionally. Many patients with migraine reported chronically shortened sleep patterns similar to that observed in persons with insomnia, with 38% of patients sleeping on average 6 hours per night. (these parameters not included in our study) Migraines were triggered by sleep disturbance in 50% of patients. "Awakening headaches" or headaches awakening them from sleep were reported by 71% of patients. Interestingly, sleep was also a common palliative agent for headache; 85% of migraineurs indicated that they chose to sleep or rest because of headache and 75% were forced to sleep or rest because of headache. Patients with chronic migraine reported shorter nightly sleep times than those with episodic migraine.(25). Hormonal factors appeared in 53% , being the pre-menstrual period the most frequent trigger. Physical activities caused migraine in 13%, sexual activities in 2.5% and 64% reported emotional stress a trigger factor. 81% related some sleep problem as a trigger factor. Regarding environmental factors, smells were reported by 36.5%..(26). The hormones are playing a major role in the decreasing the features of migraine after fifty especially in female (post menopause).(26) This study findings according to the result are within the concept of decreasing features of migraine headache with age especially with the duration of acute attack, photophobia, phonophobia and vomiting. In Kelman L study The above 50 years age group tended to have less dizziness, photophobia, phonophobia, nausea, vomiting, temporal location, throbbing, pressure, stabbing, headache days, moderate days, severe days, aggravation of headache by activity, and recurrence but tended to have more mild days and

is in agree with our study.(27).

Conclusion:

The study shows alleviation of the most features in the above 50 years old group whether the differences are statically significant like (unilateral site of pain, aggravation with activity, Sleeping late, Photophobia, Phonophobia, Vomiting) or decrease but with no statistical significant differences (nausea, tiredness, hungry, uncomfortable sleep, food and needs rest).

Author's contribution:

Akram M.AL-Mahdawi: study conception,study design

Gheyath Al Gawwam : interpretation of data

Saad Hadi Al-ANI: Acquisition of data analysis,critical revision}

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