

Underdiagnosis and the Impact of Headache-related Disability on the Quality of Life Patients

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ABSTRACT

Objective: To determine the extent of under-diagnosis of migraine and the impact of headache-related disability on the quality of life of patients.

Study Design: Prospective, Observational.

Place and Duration of Study: This Study was conducted at the Department of Neurology, Medical Unit II, PUHMS, Nawabshah from 1.1.2009 to 31.12.2009.

Methodology: The demographic and clinical data was collected in a proforma. Migraine was diagnosed according to the International Headache Society Classification. Neurological examination and routine laboratory tests were done in all cases. CT Scan of brain was performed whenever deemed necessary. A clinically reliable Migraine Disability Assessment Scale (MIDAS) was administered to the patients with migraine headache. The disability was rated as Grade I (little or no disability) to Grade IV (severe disability) based on the information provided by the patients.

Results: Sixty-eight cases were documented. Male=31, Female=37. Age ranged from 10-59 years. The majority were in the age group of 10-39 years. Fifty-seven (83.8%) had migraine without aura (common migraine) while 11/68 (16.2%) had migraine with aura (classic migraine). In 36/68 (52.9%) nausea was the most frequent associated symptom. Photophobia (17.6%) was more common than phonophobia (5.8%). Visual changes (flashing lights) was the most common associated symptom in migraine with aura. Stress was the most frequent triggering factor in 29.4%. Only 8/68 (11.7%) were previously diagnosed as they were taking some anti-migraine therapy whereas majority 60/68 (88.3%) were newly diagnosed at the time of our assessment. The usual frequency of headache was once/week in 30/68 (44.2%), once/2weeks in 22/68 (32.3%) and once/month in 16/68 (23.5%). Disability was Grade I in 8/68 (11.7%), Grade II in 12/68 (17.6%), Grade III in 30/68 (44.2%) and Grade IV in 18/68 (26.5%). Most of our cases were unaware of their illness nor they were provided relevant information by their physician regarding migraine and its associated aspects.

Conclusions: This study indicate that migraine is under diagnosed in a greater proportion of cases in our region. The headache-related disability caused by migraine adversely affects the quality of life of patients. Unawareness about the disease appears to be the main reason for under diagnosis and increasing disability in our patients.

Key Words: Migraine, Headache, Diagnosis, Disability.

INTRODUCTION

Migraine is a common neurological disorder^{1,2}. Approximately 18.% females and 6% males suffer from migraine^{2,3}. The prevalence varies with age being highest in 35-45 years old². It is defined as episodic attacks of headache lasting 4 to 74 hours with two of the following symptoms: unilateral pain, throbbing, aggravation on movement, pain of moderate or severe intensity and one of the following associated symptoms: nausea or vomiting, photophobia or phonophobia⁴. The above features are present in patients having migraine without aura (common migraine) whereas those with additional transient focal neurological symptoms usually visual have migraine with aura (classic migraine)⁵. It has been estimated that 64% patients have migraine without aura, 18% have migraine with aura, while 13% have both types of migraine and only 5% have aura without headache⁶. The frequency and duration of headache varies in different individuals. While 10 percent of patients have

weekly attacks in 62 percent the attacks occur on a monthly basis². The World Health Organization has listed migraine among the most disabling medical illnesses⁷. The American Migraine Study II³ indicate that 81% of those suffering from migraine report functional impairment because of headache. While early diagnosis and treatment would help in reducing the disability and the frequency of further episodes, under-diagnosis and under-treatment would deprive the patients of such benefits. Even in developed Western countries migraine remain under diagnosed and under treated^{1,2,3}. Given that, the situation is unlikely to be better in our region. We therefore expect more undiagnosed cases and greater degree of disability due to migraine in our patients. The objective of our study was to determine the extent of under-diagnosis of migraine and the impact of headache-related disability on the quality of life of patients.

MATERIALS AND METHODS

The study was conducted at the department of

Neurology in Medical Unit II Peoples University of Medical and Health Sciences for Women, Nawabshah, during 1st January 2009 to 31st December 2009. A total number of 68 patients were included during the study period. Detailed history and clinical examination was documented in a proforma especially designed for this study. Migraine was diagnosed according to the International Headache Society Classification⁴. Neurological examination and routine laboratory tests were done in all cases. CT Scan of brain was performed whenever deemed necessary. A clinically reliable Migraine Disability Assessment Scale (MIDAS)⁸ was administered to the patients. This scale is universally used to grade the disability caused by migraine headache in the last 3 months. The questions were centered on three aspects: (1) Missing job, school or household work due to headache. (2) Loss of productivity at job, school or during household work. (3) Missing family, social or leisure activities because of headache. Depending upon the scores obtained on MIDAS, the disability was graded as Grade I (score 0-5), Grade II (score 6-10), Grade III (score 11-20) and Grade IV (score 21 and above).

RESULTS

Sixty-eight cases were documented. Male=31, Female=37 (Fig. 1). Age ranged from 10-59 years. The majority were in the age group of 10-39 years. Fifty-seven (83.8%) had migraine without aura (common migraine) while 11/68 (16.2%) had migraine with aura (classic migraine) (Table 1). In 36/68 (52.9%) nausea was the most frequent associated symptom.

Table No.1: General characteristics of patients (n=68)

Gender	Number	Percent
Male	31	45.6
Female	37	54.4
Migraine		
Without aura	57	83.8
With aura	11	16.2
Diagnosed		
Previously & taking some anti migraine therapy	8	11.8
Newly diagnosed at the time of assessment	60	88.2
Frequency of headache		
Once / week	30	44.1
Once / 2 week	22	32.4
Once / month	16	23.5

Photophobia 17.6% was more common than phonophobia (5.8%). Visual changes (flashing lights) was the most common associated symptom in migraine with aura patients (16%). Stress was the frequent precipitating factor in 29.4% of the cases. Only 8/68 (11.7%) were previously diagnosed as they were taking

some anti-migraine therapy whereas majority 60/68 (88.3%) were newly diagnosed at the time of our assessment. The usual frequency of headache was once/week in 30/68 (44.2%), once/2weeks in 22/68 (32.3%) and once/month in 16/68 (23.5%) (Fig 2). Disability was Grade I in 8/68 (11.7%), Grade II in 12/68 (17.6%), Grade III in 30/68 (44.2%) and Grade IV in 18/68 (26.5%) (Table 2). Most of our cases were unaware of their illness nor they were provided relevant information by their physician regarding migraine and its associated aspects.

Table No.2: Disability (n=68)

Disability	Number	Percent
Grade I	8	11.8
Grade II	12	17.6
Grade III	30	44.1
Grade IV	18	26.5

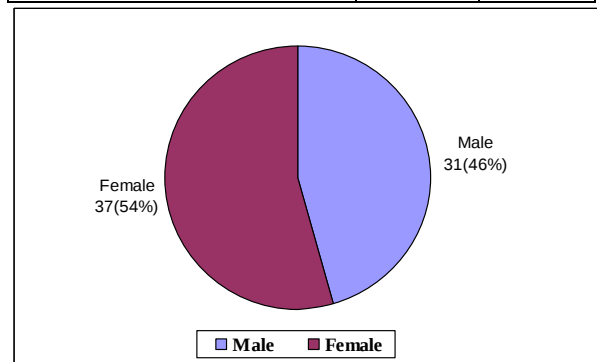


Figure 1: Gender distribution

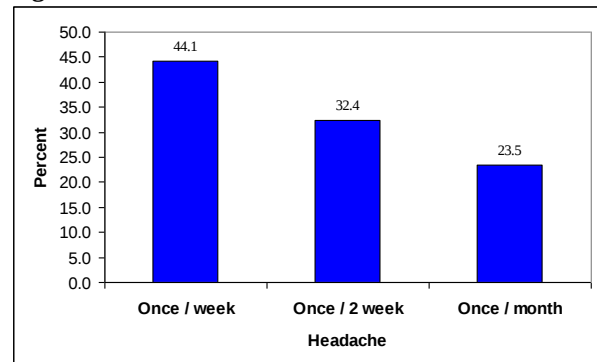


Figure 2: Frequency of Headache

DISCUSSION

We studied the extent of under-diagnosis of migraine and the impact of headache-related disability on the quality of life of patients. The disability in majority of our patients ranged from moderate Grade III (score 11-20) to severe Grade IV (score 21+). Male and female were almost equally affected and the disability in both sexes was comparable. Studies done in the developed Western countries have shown that migraine is more common in females (18%) than in males (6%) and that it is also more disabling in females than in males³. This is inconsistent with our findings. We found no marked

gender differences. One reason for this discrepancy could be the small size of our study. Another possibility may be the cultural differences where women in our culture are less likely to be involved in the office-work compared to those in the Western countries. Women in our part of the world mostly bear the burden of household work whereas a significant proportion of women in the Western world have double the work load (household + office work). That we believe could account for a greater headache-related disability among females in Western countries compared to that of ours.

In our study the most common age-range affected was 10-39 years. The reported highest prevalence is in the age-group 35-45 years³. These differences are likely due to the population variations⁹ where the proportion of younger segment of our population is increasing whereas in Western countries the older population is increasing.

Migraine without aura was more common (83.8%) than migraine with aura (16.2%) which is consistent with the previously published reports⁵. However, under-diagnosis was a major issue as the majority of our patients (88.3%) were not diagnosed prior to our assessment and only 11.7% were on some anti-migraine therapy suggesting that they were previously diagnosed. The American Migraine study³ reported that only 38% of cases were ever diagnosed by a physician which means that 62% of the cases remained undiagnosed even in the developed countries. Our figure of 88% undiagnosed cases compared to reported 62% is obviously quite high but not surprising. It could either be due lack of diagnostic ability on the part of physicians or more likely due to lack of awareness about this illness in the general population. It is conceivable that people in our region do not consider migraine as a disease which require proper consultation and treatment. Since the majority of migraineurs get relief by taking over-the-counter analgesics¹⁰, they tend to avoid seeing a physician who would otherwise charge fees and ask them to go for various laboratory tests. However, increasing frequency of headaches may compel them to seek medical treatment. This is evident in our data as the large number of our cases (44.2%) had usual frequency of one episode per week compared to the reported frequency of once per week in only 10% of the cases². Furthermore, migraine is episodic, the pain-related disability is usually reversible and self limiting once the episode is over, but the fear of another episode of headache remains and this may further add to the agony and uncertainty¹¹. That may be another reason for seeking medical treatment. Interestingly, the majority of our patients were headache-free at the time of assessment but they were concerned about the future episodes.

According to WHO migraine is one of the most disabling illnesses⁷. It has been estimated that in 50% of the migraine sufferers there is 90% work loss due to

headache-related disability³. In American Migraine Study II², 51% reported work or school activity reduction by more than 50%. This is almost close to 44% of our cases who had similar reduction. In the same study², 53% reported severe headache causing extreme impairment in activities requiring bed rest. The same degree of impairment was present in 26% of our cases which is lower than reported (53%). The reason for this is not clear. The younger age of onset in our patients may account for these differences as younger individuals are more likely to be resilient to pain compared to the older individuals. Indeed, there are reports indicating that age, among other factors, may influence the threshold for migraine¹². Moreover, stress as a precipitating factor was present in 29.4% of our cases which is lower than that reported by Robins (62%)¹³ and even much lower than reported in a local hospital-based study by Shehbaz et al (90%)¹⁴. It is interesting to note that these studies^{13,14} were done at the urban centers whereas at our centre patients were mostly from the rural areas. This may represent the rural-urban differences where people in the urban areas are more prone to stress compared to those living in rural areas. Identification of co-morbid psychiatric illness in migraineurs is however important as these may have added adverse impact on the quality of life of patients^{14,15}. The functional impairment caused by migraine may have broader consequences not for the affected individuals only but for the society as a whole. Currently better therapeutic options are available for the acute treatment and prophylaxis of migraine¹⁶. It is therefore imperative that the awareness about this disease be enhanced among the general physicians and the public at large so that the therapeutic benefits can be derived sooner.

CONCLUSIONS

This study indicates that migraine is under diagnosed in a greater proportion of cases in our region. The headache-related disability caused by migraine adversely affects the quality of life of patients. Unawareness about the disease appears to be the main reason for under diagnosis and increasing disability in our patients.

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