Primary Headache among Elderly People of Lahore

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ABSTRACT
Background: Headache is a most common complaint seen among patients visiting neurologist and general physicians. The incidence of headache was reported between 12–50 percent among elderly people. Headache has ability to affect adversely the life quality of patients, limits community and domestic activities and hence, carries a significant disability burden.

Objective: The objective of the study is to investigate the primary headache among elderly people of Lahore.

Material and Methods: It was a prospective cross-sectional study conducted in Lahore General Hospital, Lahore. Patients aged 18 years and above referred to Neurology Outpatient Department of LGH for headache were included. The participants were divided into 2 groups: aged 18 to 64 years (younger patients) and aged >65 years (elderly patients).

Results: Among 90 younger respondents the mean age was 28.7±5.3 years while among 75 elderly respondents the mean age was 75.6±8.7 years. In younger and elderly groups, 8.9% & 38.7% patients had mild headache, 47.8% & 21 28.0% had moderate headache and 43.3% & 25 33.3% patients had severe headache, respectively. In younger and elderly groups, 54.5% & 10.7% patients had migraine without aura, 14.5% & 6.6% had migraine with aura, 11.1% & 4.0% had chronic migraine, 10.0% & 20.0% patients had infrequent and frequent episodic tension-type headache, 3.3% & 22.7% patients had chronic tension-type headache, 1.1% & 2.7% patients had cluster headache, 1.1% & 8.0% had trigeminal neuralgia, 0.0% & 2.7% had glossopharyngeal neuralgia and 4.4% & 22.6% patients had unspecified headache, respectively.

Conclusion: Study concluded that among elderly patients, headache was started any time while mild headache, chronic tension-type headache, unspecified headache, throbbing/pulsating and <15 headache days per month were more prevalent among elderly patients.

Keywords: Primary headache, elderly, people, intensity

INTRODUCTION
Headache is a most common complaint seen among patients visiting neurologist and general physicians. According to WHO (World Health Organization) headache is ranked among top ten disabling conditions worldwide[2,4] and affects population of all age groups, socioeconomic status, races and is more prevalent among females.[2,9] It has been estimated that almost half (46%) of the adult population have had a headache at least once within the year[2,6] with the life-time prevalence of 66%.[1] The prevalence of headache is found high in Eastern Mediterranean region while in Pakistan the prevalence of headache is 78.8%.[3]

Headaches can be divided into primary and secondary causes.[2,9,10] Primary type of headaches are comprised of several entities that lead to persistent and episodic headache without a significant pathologic process, traumatic injury or disease.[1,4,10] The most frequent primary headaches constitute tension-type headaches, cluster headaches and migraine headaches.[1,5] Secondary headaches are defined by their suspected etiology.[1,4]

Globally, the primary type of headaches are much common than secondary headaches.[1] The primary headache is responsible for 90% cases while secondary headache for just 10% cases.[1,4]

Among elderly people, the incidence of headache was reported between 12–50 percent, with repeated headaches (>2 times/month) happening among <17 percent of people aged above 65 years.[2,7] Although, primary headaches normally decrease their incidence in lifetime, 13 percent females and 7 percent males aged above 65 years reported headache complaint. However, headache is tenth warning sign mostly reported by female aged above 65 years while it is fourteenth symptom reported by males. Primary headaches are also noticed by physician among elderly patients utilizing ICHD-II.[1,10] Among elderly patients aged above 65 years, the incidence of migraine reduces while symptoms of headaches get more peculiar and more frequently accompanied by aura.[1,10] Headache has ability to affect adversely the life quality of patients, limits community and domestic activities and hence, carries a significant disability burden.[1,4]

Among elderly people, identifying and treating the headache complaints can be difficult. Also the elderly population is more probable to have critical etiologies regarding onset of new headaches, requiring the brain imaging like a primary step in workup. In addition, medication treatment needs meticulous evaluation regarding comorbid conditions, decreased medicine tolerance and medicine overuse.[5,9]

Primary headache is underestimated, undiagnosed and undertreated in many developing countries due to numerous reasons such as lack of education, self-medications and inadequate knowledge of patients regarding effect of headache on their life quality[9] To the best of our knowledge, primary headache has been insufficiently investigated in Pakistan. Therefore, current study aims to investigate the primary headache among elderly people of Lahore.

MATERIAL AND METHODS
It was a prospective cross-sectional study conducted in Lahore General Hospital, Lahore after approval of hospital ethical committee. Patients aged 18 years and above referred to Neurology Outpatient Department of LGH for headache were included. All newcomers were interviewed regarding presence of the headache. In study population, patients with 3 month headache were assessed. Patients who had headache secondary to intracranial mass lesions were not included. From all patients, informed written consent was obtained. The participants were divided into 2 groups: aged 18 to 64 years (younger patients) and aged >65 years (elderly patients).

Study utilized a structured headache questionnaire. The IHS (Int’l Headache Society) classification and ICHD-II (Int’l Headache Criteria II) were utilized to categorize the subtypes of headache. Neuro-imaging examinations of brain and/or cervical spine were carried out, when required. All patients were followed up in neurology department after one to five months. Among patients, 11 were unable to reach the hospital owing to numerous issues were interviewed by telephone.

Information was collected regarding demographic
characteristics, marital status, significant previous medical history and several questions about headache profile. Specific data collected regarding headache included onset time, site, numbing, character and intensity. The CDH (chronic daily headache) was defined like a headache frequency >15 days per month. The diagnosis of chronic daily headache and its subtypes was done during initial interview.

The diagnosis of different subtypes of headache was based on IHS Criteria (ICHD II). In brief, the much common kinds of headaches were: chronic migraine, migraine with aura (typical aura along with migraine headache), migraine without aura, uncommon episodic tension-type headache, frequent episodic tension type headache, cluster headache, chronic tension-type headache, unspecified headache and trigeminal neuralgia.

All descriptive statistics were performed utilizing SPSS (Statistical Package for Social Sciences) version 24.0. For categorical data, Chi-square test or Fisher’s test was used. Continuous variables were expressed as means and analyzed with Student’s t test. A P-value <0.05 was taken as significant.

RESULTS
Table-1 describes the demographic characteristics of the patients and found among 90 younger respondents the mean age was 28.7±5.3 years while among 75 elderly respondents the mean age was 75.6±8.7 years. The results were found statistically significant (P<0.05).

    | Time of onset (n, %) | Young (n=90) | Elderly (n=75) | p-value |
    |---------------------|--------------|----------------|---------|
    | On waking up        | 13 (14.4%)   | 27 (36.0%)     | 0.004   |
    | Afternoon/evening   | 20 (22.2%)   | 16 (21.3%)     | 1.001   |
    | Night               | 6 (6.7%)     | 3 (4.0%)       | 0.3     |
    | Any time            | 51 (56.7%)   | 29 (38.7%)     | 0.07    |

Table-2 demonstrates the time of onset of headache among patients and found the most of the younger patients 51 (56.7%) said that headache starts any time, followed by, afternoon/evening 20 (22.2%), on waking up 13 (14.4%) and night 6 (6.7%). Similarly, majority of the elderly patients 29 (38.7%) said that headache starts any time, followed by, on waking up 27 (36.0%), afternoon/evening 16 (21.3%) and night 3 (4.0%). The results were found statistically significant (P<0.05) for on waking up and night.

Table-2: Distribution of patients according to age

<table>
<thead>
<tr>
<th>Character (n, %)</th>
<th>Young (n=90)</th>
<th>Elderly (n=75)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throbbing/pulsating</td>
<td>59 (65.6%)</td>
<td>34 (45.4%)</td>
<td>0.03</td>
</tr>
<tr>
<td>Sharp/stabbing</td>
<td>18 (20.0%)</td>
<td>13 (17.3%)</td>
<td>0.68</td>
</tr>
<tr>
<td>Tightness/pressing</td>
<td>13 (14.4%)</td>
<td>19 (25.3%)</td>
<td>0.12</td>
</tr>
<tr>
<td>Not specified</td>
<td>0 (0.0%)</td>
<td>9 (12.0%)</td>
<td>0.004</td>
</tr>
</tbody>
</table>

Table-3 indicates that in younger and elderly groups, 49 (54.5%) & 8 (10.7%) patients had migraine without aura, 13 (14.5%) & 5 (6.6%) had migraine with aura, 10 (11.1%) & 3 (4.0%)
had chronic migraine, 9 (10.0%) & 15 (20.0%) patients had infrequent and frequent episodic tension-type headache, 3 (3.3%) & 17 (22.7%) had chronic tension-type headache, 1 (1.1%) & 2 (2.7%) patients had cluster headache, 1 (1.1%) & 6 (8.0%) had trigeminal neuralgia, 0 (0.0%) & 2 (2.7%) had glossopharyngeal neuralgia and 4 (4.4%) & 17 (22.6%) patients had unspecified headache, respectively. The results were found statistically significant for migraine with & without aura, chronic tension-type headache and unspecified headache.

Obesity increases the risk of headache among patients. Study showed encouraging results that patients in younger groups had normal BMI, however, elderly patients were overweight (P=0.43). The findings of our study are better than the study conducted by Tai and teammates (2012) who confirmed that patients in both groups were overweight (mean BMI: in younger 25.24±5.92 and in elderly 25.92±4.78) (P=0.44).[2]

The findings of the study highlighted that among younger patients, more than half (54.4%) were single while among elderly patients majority (62.2%) of the patients were married. The results of the most recent studies performed by Li et al. (2020) and Mohamed (2021) showed that most of the patients 69.6% and 71.4% were married, respectively.[3] But another similar study carried out by Tai and teammates (2012) asserted that among younger patients, 55.8% were single and among elderly patients 65.7% were married.[4]

When the time of onset of headache among patients was evaluated, study disclosed that among most of the younger patients (56.7%) headache was started any time, followed by, afternoon/evening (22.2%), on waking up (14.4%) and night (6.7%). Similarly, among majority of the elderly patients (38.7%) headache was started any time, followed by, on waking up (36.0%), afternoon/evening (21.3%) and night (4.0%). The findings of a study conducted by Tai and teammates (2012) exhibited almost similar scenario who confirmed that among majority of younger patients (55.8%) headache was started any time, followed by, afternoon/evening (22.1%), on waking up (14.7%) and night (7.4%). Likewise, among majority of the elderly patients (40.0%) headache was started any time, followed by, on waking up (35.7%), afternoon/evening (21.4%) and night (2.9%).[5] A study carried out by Spiering and fellows (1997) highlighted that among 33.8% patients, headache occurred during night, followed by, during morning (27.9%), during afternoon (23.6%) and during evening (14.7%).[6] In our study 74.4% patients in younger group and 52.0% patients in elderly group had <15 headache days/month and remaining proportion in both groups had >15 headache days/month. The findings of our study are comparable with a study done by Tai and teammates (2012) who also asserted that majority of the patients (71.6%) in younger group and 52.9% patients in elderly group had <15 headache days/month while rest of the patients in both groups had >15 headache days/month.[7]

Another recent study performed by Iriria and comrades (2021) reported that 38.5% patients had ≥15 headache days/month.[8]

Study further disclosed that among younger patients, majority (51.1%) had temporal headache, followed by, occipital (16.7%), frontal (12.2%), vertex (11.1%), whole head (5.6%), migrating (1.1%), face (1.1%) and back of neck (1.1%) while among elderly patients, mainstream (28.0%) had occipital headache, followed by temporal (25.4%), frontal (13.3%), vertex (10.7%), whole head (8.0%), face (8.0%), back of neck (5.3%) and migrating headache (1.3%). Virtually the similar results were also reported by a study carried out by Tai and teammates (2012) who elucidated that among younger group, most of the patients (49.6%) had temporal headache, followed by, occipital (16.8%), frontal (12.6%), vertex (11.6%), whole head (6.3%) and 1.1% each for migrating, face and back of neck while among elderly patients, mainstream (28.8%) had occipital headache, followed by temporal (25.7%), frontal (12.9%), vertex (10.0%), face (10.0%), whole head (7.1%), back of neck (4.3%) and migrating headache (1.4%).[9] A study carried out by Noor and collaborators (2016) reported that most of the patients (33.4%) had frontal headache, followed by, right temporal (20.3%), left temporal (18.0%), parietal (33.4%), occipital (9.1%), face jaw (3.1%) and cervical (3.0%).[10]

The findings of our study demonstrated that the type of headache among mainstream (65.6%) of younger patients was throbbing/pulsating, followed by, sharp/stabbing (20.0%) and tightening/pressing (14.4%) while among elderly patients, the type headache was throbbing/pulsating, followed by, tightness/pressing (25.3%), sharp/stabbing (17.3%) and not specific (12.0%). The results of a study undertaken by Noor and
collaborators (2016) confirmed that the type of headache among majority (31.7%) of the patients was dull, followed by, throbbing (26.2%), aching (19.8%), tight band (12.4%) and sharp (9.9%).

Another comparable study reported that the type of headache among major proportion (64.2%) of younger patients was throbbing/pulsating, followed by, sharp/stabbing (20.0%) and tightness/pressing (14.7%) while among 45.7% elderly patients, the type headache was throbbing/pulsating, followed by, tightness/pressing (25.7%), sharp/stabbing (17.1%) and not specific (11.4%).[2]

During study intensity of headache was also assessed and found that among younger patients, majority (47.8%) had moderate headache, followed by severe (43.3%) and mild (8.9%) while among elderly patients, mainstream (38.7%) had mild headache, followed by, severe (33.3%) and moderate (28.0%). In a study Tai and teammates (2012) also confirmed that among younger group, most of the patients (47.4%) had moderate headache, followed by severe (43.2%) and mild (9.5%) while among elderly group, mainstream (40.0%) of patients had mild headache, followed by, severe (32.9%) and moderate headache (27.1%).[10] Another study carried out in 2019 by Desouky and assistants highlighted that most of the patients (50.0%) had moderate headaches, followed by severe headaches (44.7%) and mild headache (5.3%).[20]

When the headache was categorized, study indicated that among younger patients, majority (54.5%) had migraine without aura and 14.5% patients had migraine with aura but among elderly patients majority (22.7%) had chronic tension-type headache and 22.6% patients had unspecified type of headache while remaining insignificant proportion in both groups had chronic migraine, infrequent and frequent episodic tension-type headache, cluster headache, trigeminal neuralgia and glossopharyngeal neuralgia etc. The findings of a study undertaken by Caratuzzolo and companion (2017) described that 17.2% younger patients had migraine without aura, followed by, chronic migraine (6.4%), tension type headache (5.5%), migraine with aura (3.1%) and cluster type headache (2.1%) while 15.6% elderly patients had migraine without aura, followed by, tension type headache (10.5%), chronic migraine (6.3%), migraine with aura (1.4%) and cluster headache (0.8%).[10] However, a study done by Song and associates (2016) elucidated that most of the patients (46.6%) in younger group had tension type headache, followed by, migraine (36.2%), other primary headache disorders (8.6%) and cluster headache (1.7%) while among elderly patients, 46.1% had tension type headache, followed by, migraine (11.2%) and other primary headache disorders (25.7%).[23]

CONCLUSION

Study concluded that among elderly patients, headache started any time while mild headache, chronic tension-type headache, unspecified headache, throbbing/pulsating and <15 headache days per month were more prevalent among elderly patients.

REFERENCES
