

Migraine in the elderly — diagnosis and treatment: a single-centre experience

Izabela Domitrz

Department of Neurology, Faculty of Medicine and Dentistry, Warsaw Medical University, Warsaw, Poland

Keywords: elderly, epidemiology, general practitioner, migraine, older adults

To the Editors

It is estimated that more than 10% of the population worldwide suffer from migraine [1, 2] and migraine is considered a lifelong disease [3, 4]. However, the frequency of migraines depends on the age of the patient [5] and the number of severe migraine attacks decreases with age [6]. The decrease in migraine frequency appears to be directly proportional to the age of the menopause or andropause. The menopausal / andropausal age is estimated at 45–55 years, so the older migraine patient could be defined as someone aged 55 or over.

The American Migraine Study II [7] showed that the prevalence of migraine was 25% in 50-year-old women, and c.8% in 50-year-old men. Only c.3% of patients suffer their first attack after the age of 60: 2.5% of female and 7.4% of male migraineurs. According to some authors, the frequency of migraine after the age of 65 drops to 20% [8, 9]. Other authors found migraine in only 10% of 70-year-old women and c.5% of 70-year-old men [7].

It is important to underline that other diseases, and headaches that mimic migraine attacks, increase with age, but, at the same time, with age migraine may transform into rebound headaches, medication-overuse headaches, and chronic daily headaches. Factors such as head trauma, hypertension, depression or menopause may be the cause of a symptomatic headache [10]. On the other hand, migraine-afflicted older patients can develop other symptoms at onset, such as scintillating scotoma, migrating paresthesias from the hand to the face, homonymous field defects, or speech disturbances [11, 12]. The duration of migraine symptoms can be 5–60 minutes,

but is usually about 20, whereas transient ischaemic attacks (TIA) are generally appreciably shorter lasting, or indeed longer. Posterior circulation TIA/stroke may have headache as one of the prodromal symptoms that precede stroke by days or weeks [13, 14]. Different pathogenetic backgrounds imply different treatments [15].

During a six-month observation, the population of patients at a single Warsaw Centre, the Outpatients Headache Clinic, was 468 people. The study group included 251 consecutive patients diagnosed with migraine based on the International Classification of Headache Disorder criteria devised by the International Headache Society [16]. In the study group of 251, 27 (11%) patients (four men and 23 women) were aged 55 or over (mean age 62.5 ± 5 years).

The clinical symptoms of migraine remained unchanged in the male patients. The frequency and severity of attacks in male migraineurs were similar to before the age of 55. In the female group, it was found that in 3/23 older women the migraine pattern was changed from a migraine without aura to a migraine with a typical aura, with the simultaneous intensification of migraine symptoms during the attack. All three of these women underwent detailed diagnostics to exclude a secondary background of symptoms. The remaining 20 patients had migraine attacks that were much less severe than before the menopause, with a tendency towards longer attacks that occurred less frequently.

Although the prevalence of migraine tends to decrease in the fifth and sixth decades, there are still a significant number of patients > 65 years who continue to experience migraine or have new-onset migraine. Because these older patients

Address for correspondence: Izabela Domitrz, Department of Neurology, Faculty of Medicine and Dentistry, Warsaw Medical University, Bielanski Hospital, Ceglowska 80 St., 01–809, Warsaw, Poland; e-mail: izabela.domitrz@wum.edu.pl

Received: 17.01.2024 Accepted: 04.03.2024 Early publication date: 02.04.2024

This article is available in open access under Creative Commons Attribution-Non-Commercial-No Derivatives 4.0 International (CC BY-NC-ND 4.0) license, allowing to download articles and share them with others as long as they credit the authors and the publisher, but without permission to change them in any way or use them commercially.

are often excluded from clinical trials, there are fewer evidence-based treatment guidelines for them. Migraine treatment in the older population requires careful consideration of changes in medication metabolism and increased medical comorbidities [17]. Therefore it is important to evaluate the clinical characteristics, effectiveness, and tolerability of modern migraine preventive medications e.g. anti-CGRP mAbs in the elderly. Anti-CGRP mAbs have demonstrated efficacy and safety in patients with migraine, but there is limited information regarding the elderly [18]. The aim of that study was to describe the real-life safety and effectiveness of erenumab, galcanezumab and fremanezumab in migraine patients over 65. Some recent studies [19–20] have provided real world evidence of the effectiveness and safety of anti-CGRP mAbs for migraine in patients without an upper age limit, and possible predictors of anti-CGRP response in the elderly. Muñoz-Vendrell et al. [19] concluded that anti-CGRP mAbs are safe and effective treatments in migraine patients over 65 in clinical practice. Modern anti-migraine drugs, based on a pathogenetic basis and a lack of vaso-activity, seem to be a good treatment for elderly patients, although further evidence is required regarding CGRP-mABs for the elderly [20].

Migraine is an evolving and lifelong disorder, and chronic migraine is more likely to persist into later life. The clinical presentation of older patients' migraine is not well characterised.

Our own experience and the results of our preliminary study are similar to those of other authors. In older age, migraine attacks subside in most migraine patients, and in most women who still have migraine attacks, are less severe than before the menopause.

In individual cases of changes in the symptoms of migraine, especially with the appearance of focal neurological symptoms, the symptomatic background should be considered and appropriate diagnostics performed.

Article information

Funding: None.

Authors' contributions: ID is sole author.

Acknowledgements: Not applicable.

Conflicts of interest: No conflict. ID has served as an expert on Advisory Boards and as a lecturer for Allergan/Abbvie, Novartis, Teva, Elli Lilly, Pfizer, and Lundbeg.

References

1. GBD 2015 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. *Lancet*. 2016; 388(10053): 1545–1602, doi: [10.1016/S0140-6736\(16\)31678-6](https://doi.org/10.1016/S0140-6736(16)31678-6), indexed in Pubmed: [27733282](https://pubmed.ncbi.nlm.nih.gov/27733282/).
2. Woldeamanuel YW, Cowan RP. Migraine affects 1 in 10 people worldwide featuring recent rise: A systematic review and meta-analysis of community-based studies involving 6 million participants. *J Neurol Sci*. 2017; 372: 307–315.
3. Lipton RB, Stewart WF. Migraine in the United States: a review of epidemiology and health care use. *Neurology*. 1993; 43: S6–10.
4. Buse DC, Fanning KM, Reed ML, et al. Life With Migraine: Effects on Relationships, Career, and Finances From the Chronic Migraine Epidemiology and Outcomes (CaMEO) Study. *Headache*. 2019; 59(8): 1286–1299, doi: [10.1111/head.13613](https://doi.org/10.1111/head.13613), indexed in Pubmed: [31407321](https://pubmed.ncbi.nlm.nih.gov/31407321/).
5. Stovner LJ, Hagen K, Jensen R, et al. The global burden of headache: a documentation of headache prevalence and disability worldwide. *Cephalalgia*. 2007; 27(3): 193–210, doi: [10.1111/j.1468-2982.2007.01288.x](https://doi.org/10.1111/j.1468-2982.2007.01288.x), indexed in Pubmed: [17381554](https://pubmed.ncbi.nlm.nih.gov/17381554/).
6. Riggins N, Ehrlich A. Episodic Migraine and Older Adults. *Curr Pain Headache Rep*. 2022; 26(4): 331–335, doi: [10.1007/s11916-022-01029-7](https://doi.org/10.1007/s11916-022-01029-7), indexed in Pubmed: [35384586](https://pubmed.ncbi.nlm.nih.gov/35384586/).
7. Lipton RB, Stewart WF, Diamond S, et al. Prevalence and burden of migraine in the United States: data from the American Migraine Study II. *Headache*. 2001; 41(7): 646–657, doi: [10.1046/j.1526-4610.2001.041007646.x](https://doi.org/10.1046/j.1526-4610.2001.041007646.x), indexed in Pubmed: [11554952](https://pubmed.ncbi.nlm.nih.gov/11554952/).
8. Jensen R, Stovner LJ. Epidemiology and comorbidity of headache. *Lancet Neurol*. 2008; 7(4): 354–361, doi: [10.1016/S1474-4422\(08\)70062-0](https://doi.org/10.1016/S1474-4422(08)70062-0), indexed in Pubmed: [18339350](https://pubmed.ncbi.nlm.nih.gov/18339350/).
9. Ashina M, Katsarava Z, Do TP, et al. Migraine: epidemiology and systems of care. *Lancet*. 2021; 397(10283): 1485–1495, doi: [10.1016/S0140-6736\(20\)32160-7](https://doi.org/10.1016/S0140-6736(20)32160-7), indexed in Pubmed: [33773613](https://pubmed.ncbi.nlm.nih.gov/33773613/).
10. Dees B, Coleman-Jackson R, Hershey LA. Managing migraine and other headache syndromes in those over 50. *Maturitas*. 2013; 76(3): 243–246, doi: [10.1016/j.maturitas.2013.04.009](https://doi.org/10.1016/j.maturitas.2013.04.009), indexed in Pubmed: [23759429](https://pubmed.ncbi.nlm.nih.gov/23759429/).
11. Fisher CM. Late-life migraine accompaniments as a cause of unexplained transient ischemic attacks. *Can J Neurol Sci*. 1980; 7(1): 9–17, indexed in Pubmed: [7388704](https://pubmed.ncbi.nlm.nih.gov/7388704/).
12. Young WB. A knockout punch: C. Miller Fisher's migraine accompaniments. *Headache*. 2008; 48(5): 726–727, doi: [10.1111/j.1526-4610.2008.01115.x](https://doi.org/10.1111/j.1526-4610.2008.01115.x), indexed in Pubmed: [18471122](https://pubmed.ncbi.nlm.nih.gov/18471122/).
13. Ramadan NM, Levine SR, Welch KM. Cerebral blood flow in migraine accompaniments and vertebrobasilar ischemia. *Stroke*. 1994; 25(6): 1219–1222, doi: [10.1161/01.str.25.6.1219](https://doi.org/10.1161/01.str.25.6.1219), indexed in Pubmed: [8202984](https://pubmed.ncbi.nlm.nih.gov/8202984/).
14. Ferbert A, Brückmann H, Drummen R. Clinical features of proven basilar artery occlusion. *Stroke*. 1990; 21(8): 1135–1142, doi: [10.1161/01.str.21.8.1135](https://doi.org/10.1161/01.str.21.8.1135), indexed in Pubmed: [2389292](https://pubmed.ncbi.nlm.nih.gov/2389292/).
15. Hershey LA, Bednarczyk EM. Treatment of headache in the elderly. *Curr Treat Options Neurol*. 2013; 15(1): 56–62, doi: [10.1007/s11940-012-0205-6](https://doi.org/10.1007/s11940-012-0205-6), indexed in Pubmed: [23054583](https://pubmed.ncbi.nlm.nih.gov/23054583/).
16. Headache Classification Committee of the International Headache Society (IHS). The International Classification of Headache Disorders, 3rd edition (beta version). *Cephalalgia*. 2013; 33(9): 629–808, doi: [10.1177/0333102413485658](https://doi.org/10.1177/0333102413485658), indexed in Pubmed: [23771276](https://pubmed.ncbi.nlm.nih.gov/23771276/).
17. Soni PP, Lee M, Shadbeh N, et al. Recent Advances in the Management of Migraine in Older Patients. *Drugs Aging*. 2020; 37(7): 463–468, doi: [10.1007/s40266-020-00776-9](https://doi.org/10.1007/s40266-020-00776-9), indexed in Pubmed: [32578024](https://pubmed.ncbi.nlm.nih.gov/32578024/).

18. Gonzalez-Martinez A, Sanz-García A, García-Azorín D, et al. Effectiveness, tolerability, and response predictors of preventive anti-CGRP mAbs for migraine in patients over 65 years old: a multicenter real-world case-control study. *Pain Med.* 2024; 25(3): 194–202, doi: [10.1093/pm/pnad141](https://doi.org/10.1093/pm/pnad141), indexed in Pubmed: [37847661](https://pubmed.ncbi.nlm.nih.gov/37847661/).
19. Muñoz-Vendrell A, Campoy S, Caronna E, et al. Effectiveness and safety of anti-CGRP monoclonal antibodies in patients over 65 years: a real-life multicentre analysis of 162 patients. *J Headache Pain.* 2023; 24(1): 63, doi: [10.1186/s10194-023-01585-2](https://doi.org/10.1186/s10194-023-01585-2), indexed in Pubmed: [37268904](https://pubmed.ncbi.nlm.nih.gov/37268904/).
20. Katsuki M, Kashiwagi K, Kawamura S, et al. Fremanezumab for Migraine Prevention in Japanese Elderly Aged Over 70 Years Old. *Cureus.* 2023; 15(1): e34052, doi: [10.7759/cureus.34052](https://doi.org/10.7759/cureus.34052), indexed in Pubmed: [36824556](https://pubmed.ncbi.nlm.nih.gov/36824556/).