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Editorial

Epileptic Seizures in Old Age with Dementia

Ramel Jonsson*

Department of Geriatrics, National University Hospital of Iceland, Reykjavik, Iceland

EDITORIAL

Falls, fainting, and "funny turns" (transient neurological crises characterised by focal, non-focal, or mixed neurological symptoms that last less than 24 hours) are all typical reasons for older adults to receive therapy from primary care, emergency departments, and specialty hospitals. Some, but not all, of these people will have epilepsy, which is a challenging diagnosis to make with certainty. Seizures are more likely to occur as people get older biologically rather than chronologically. Comorbidities, as well as functional and cognitive impairment, are more common in older persons than in younger people, all of which require recognition, evaluation, and care. Antiepileptic medicines' pharmacokinetics and pharmacodynamics can also be affected by age-related physiological changes. The situation is made worse by a scarcity of high-quality clinical trials that look at the best therapy options for an increasingly widespread problem.

The array of different diagnoses for elderly people can be reviewed by general physicians, geriatricians, neurologists, and cardiologists, and as a result, the necessary expertise for appropriate investigation and management is often diluted across a range of clinical disciplines. With the world's population continuing to age, the number of older people with epilepsy is set to rise even more, putting an increasing burden on health-care resources. People over the age of 65 who have late-onset epilepsy as opposed to people who have had epilepsy their entire lives. We put a lot of attention on evaluating the clinical clues that are necessary for making a correct diagnosis. The pharmacology of antiepileptic drug use in old age is reviewed, with the most common drug-drug interactions highlighted. We summarise the results of double-blind, randomised studies in the elderly, as well as the benefits and drawbacks of each antiepileptic medicine in this cohort. We also go over the effects of common comorbidities on late-onset epilepsy therapy. Finally, in this understudied group, we offer appropriate care models and ways for minimising the consequences of epilepsy and its treatment on quality of life.

Because the prevalence of seizure disorders increases dramatically after the age of 60, it's no surprise that the usage of antiepileptic drugs (AEDs) is higher among the elderly than in the general population. However, the factors influencing the use of these drugs in various settings, whether for epilepsy or for other purposes, have yet to be fully understood. Similarly, there are few studies that look into the influence of epilepsy and its treatment on the physical and social functioning of elderly persons. Because the pharmacokinetics and pharmacodynamics of AEDs can be affected by age, knowing the clinical pharmacology of these drugs in the elderly is critical for reasonable prescribing. These topics were discussed at a special session of the International Geriatric Epilepsy Symposium, which gave researchers the chance to present fresh results against the backdrop of existing data.

Though epilepsy can be caused by a variety of things, including stroke, hypoxia, infections, autoimmune disorders, trauma, and tumours, many people with epilepsy are assumed to have a genetic component. Our understanding of the genetic causes, contributors, and moderators of epilepsy has improved thanks to recent advances in molecular genetics. Up to 50% of monogenic epilepsies have a precision diagnosis thanks to next-generation sequencing, which has resulted in an explosion of gene discoveries in human illnesses. Subjects with early-onset seizures and a global neurodevelopmental delay usually had the highest diagnostic yield. To facilitate a genetic diagnosis for the remaining half of the population, new techniques that allow investigation of epigenetic regulation and longer read lengths, as well as functional testing of variants of unknown significance, even in known genes, and systematic match-making exchange, are required.

Epilepsy is more likely in the first year of life and then gradually decreases throughout childhood. Early-onset monogenic epilepsy syndromes have a wide range of clinical manifestations and prognoses, including benign and self-limited (familial) epilepsy syndromes as well as catastrophic developmental and epileptic encephalopathies. Genetic testing is vital for developing precision medicine tactics as well as avoiding needless and perhaps hazardous diagnostic procedures and treatments. A genetic diagnosis can also help with more targeted genetic counselling and provide important information on a disease's natural history and prognosis. It also allows the subject and their family to join gene-specific networks of families suffering from the same disease.

Correspondence to: Ramel Jonsson, Department of Geriatrics, National University Hospital of Iceland, Reykjavik, Iceland, E-mail: jonsson.ra@gmail.com

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