

Need for Comprehensive Attention to Epilepsy as a Health Problem

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Editorial

Epilepsy is one of the most common neurological diseases, affecting between 50 and 65 million people of all ages, races, social classes, and geographic locations [1,3]. It is considered by some authors that around 8% of the general population will suffer an epileptic seizure throughout their life [4]. In addition to the recurrence of epileptic seizures, the underlying cause and the adverse effects of treatment have neurological, cognitive, psychological and social consequences that significantly affect the quality of life of those affected and make the disease a complex nosographic entity and, therefore [1], a global public health problem, which requires adequate attention [5].

It is estimated that between 68%-84% of people with epilepsy could live seizure-free if properly diagnosed and treated [4,6,7]. What is worrying is that about 80% of patients live in low- and middle-income countries and that most of them do not have access to treatment [6]. It can be stated that epilepsy affects 1-2% of the world's population. Many more people, however, - an estimated 200,000,000 - are also affected by this disorder, as are family members and friends who live with these patients [8]. This disease has significant economic repercussions, in terms of health care needs, premature deaths, and loss of work productivity [5,8].

According to estimates, around five million cases of epilepsy are diagnosed annually worldwide. In high-income countries, an estimated 49 out of every 100,000 people are diagnosed with epilepsy each year. In low- and middle-income countries, the number can be as high as 139 per 100,000 people [5]. The annual incidence of unprovoked epileptic seizures is 33-198 per 100,000 inhabitants/year, and the incidence of epilepsy is 23 to 190 per 100,000 inhabitants/year [8]. Other authors consider that the incidence rate of this disease is estimated at around 50 to 60 per 100,000 person-years, and assert that up to 8% of people suffer at least one epileptic seizure in their life [1,9,10].

This is probably due to the increased risk of endemic diseases such as malaria or neurocysticercosis, the increased incidence of road traffic injuries, birth-related trauma, variations in medical infrastructure, the availability of preventive health programs and the accessibility of care [5,8]. It is also significant that around 45 million people who suffer from epilepsy live in rural areas of countries classified as developing and 17 million reside in urban areas. However, around seven million patients (10%) live in countries considered developed. All of this relates to the high incidence, prevalence and mortality of epilepsy in the lowest socioeconomic classes. Three quarters of affected people living in low-income countries do not receive the treatment they need [5,11]. Recent studies report prevalence rates of 4-8 per 1000 inhabitants in developed countries, which coincides with [12].

Previous case studies that demonstrated that the point prevalence of epilepsy is between 4 and 10 per 1,000 people, making it one of the most prevalent neurological diseases [13]. The prevalence of epilepsy in Latin America and Africa is among the highest reported in the world. In South America it is 18 per 1,000 inhabitants, in Sub-Saharan Africa it is 15 per 1,000; while in Europe it is 4.5 to 5.0 in children and 6 to 7 in adults per 1,000 and in Asia it is 6 per 1,000 inhabitants. All of this denotes the difference in the prevalence of the disease in different ethnic groups and the need to take action in this regard [12].

Other authors have referred to the overall prevalence of active epilepsy (a person with epilepsy who has had at least one epileptic seizure in the previous 5 years, regardless of treatment with antiseizure medication), which varies from 2.7 to 41 percent per 1000 inhabitants, although in most reports the rate of active epilepsy is in the range of 4-8 per 1000 inhabitants [11].

According to data from the World Health Organization (WHO), in low- and middle-income countries, there is little availability of anti-seizure medications, with an average availability of less than 50% in the public sector. Estimates indicate that approximately ¾ of people with epilepsy living in low-income countries do not receive adequate treatment, which has been called the “treatment gap” and represents a significant health problem [14]. This disease, in turn, can lead to death, a danger that is not taken into account and could be avoidable [15]. Most authors consider that patients with epilepsy have a risk of mortality three times greater than the general population; A key element that explains this risk, among others, is the lack of control of epileptic seizures, since patients who present lack of seizure control are at risk of suffering trauma, fractures, burns and psychosocial morbidities, such as depression, anxiety and even death. possibility of suicide [2]. In addition to the risk of premature death in people with epilepsy, their lives are often affected by stigmatization, discrimination and violation of human rights, in some countries [6,16]. It is estimated that around 125,000 people worldwide succumb to epilepsy each year. Standardized mortality rates are 1.6 to 3.0 times higher than those of the general population in high-income countries, and up to 7.2 times higher in low- and middle-income countries [17,18]. Other international statistics show annual mortality rates of 2.1 per 100,000 inhabitants per year, varying from 1 to 8 in different countries. The causes of death in epilepsy, therefore, must be identified and actions must be taken, including treatment and education, to avoid preventable deaths [15].

By consensus, mortality associated with epilepsy can be related to the following categories:

- That caused directly by epileptic seizures. It is the most frequent and occurs due to complications in the course of a prolonged status epilepticus, with accidents being frequent, including drowning [19].
- That associated indirectly or in part with epilepsy, such as suicide and depression, which have an important role in the causes of premature mortality [20,21].
- That which is due to other factors, for example, the causes of the disease or its complications [21].
- There is an increased risk of Sudden Unexplained Death in Epilepsy (SUDEP), with an estimated incidence of 1.8 per 1000 patient years. This is the greatest cause of premature mortality in patients with epilepsy and even more so if it is difficult to control. The most important risk factor is a history of a generalized onset seizure (tonic-clonic). The risk has been estimated 24 times higher in young people than in people of the same age [22].
- An increase in mortality has also been reported in patients with intellectual disabilities, with long-term use of antiseizure medication (ASM) and in post-stroke epilepsy in young patients [23].

Most authors agree that Sudden Unexpected Death in Epilepsy (SUDEP) and status epilepticus are the most important causes of mortality related to epilepsy [9,24]. Drug resistance in these patients deserves special mention. Between 70-80% of all patients with epilepsy are controlled with medical treatment and 20-30% are chronically refractory, being considered drug-resistant epilepsy [25]. Drug resistance represents a significant problem for the patient, with devastating consequences, including persistence of seizures and morbidity derived

from epilepsy, medication, social isolation, unemployment and decreased quality of life. In turn, this condition carries a poor prognosis, with an increased risk of sudden death and a mortality rate of 1/200 inhabitants/year as a direct consequence of the crises [26]. Some authors point out that mortality rates in cases refractory to medical treatment for all causes are lowest in children aged 1-14 years (4.1 deaths/1000 inhabitants/year) and increase with age (32.1 deaths per 1000 inhabitants /years between 55-72 years) [26]. For all the above, it is essential to comprehensively manage the patient with this disease and the need to take into account possible prevention measures, such as adequate control of seizures, especially those of generalized onset (tonic-clonic), thus avoiding the possibility of complications. Lifestyle changes, the appropriate use of antiseizure medication, and the appropriate use of surgery for patients with criteria should be taken into account [25]. It is necessary that the Ministries of Public Health take into consideration the education of the people and the preparation of all health professionals in the management of this disease. Primary care in this disease is necessary, both in the management and in the prevention of 25% of epilepsy cases [6].

On May 27, 2022, Member States of the World Health Organization approved the Intersectoral Global Action Plan on Epilepsy and Other Neurological Disorders at the 75th World Health Assembly in Geneva, Switzerland. There, the necessary actions are established to improve access to care and treatment for people living with neurological disorders, including epilepsy, through a comprehensive and coordinated response between sectors [27,28]. Raising awareness that we are facing a health problem that needs an adequate response would imply adequate control of the disease and avoiding preventable deaths due to this concept.

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