

# Epilepsy Treatment Problem in the Children in Sub-Saharan Africa: Experience of Ziguinchor in the South of Senegal

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## Introduction

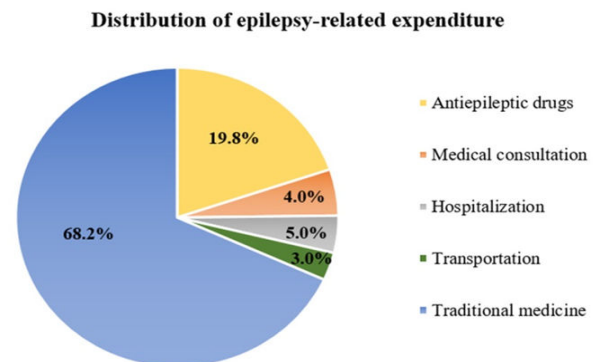
Epilepsy poses a real public health problem in sub-Saharan Africa. The World Health Organization (WHO) estimates that approximately 50 million human beings suffer from epilepsy of which 80% live in developing countries. Generally, and regardless of age, the prevalence of epilepsy in sub-Saharan Africa varies between 7% and 14.8%. It mainly concerns children. In Senegal, the incidence and prevalence of epilepsy are poorly assessed due to general data errors. In the Dakar suburbs, it is 8.35% to 14% [1].

## Description

Neuropsychiatric disorders contribute 13.1% to the global burden of disease with epilepsy alone accounting for 0.5%. Epilepsy is the most common neurological condition encountered by specialists in the WHO African region which is comprised of 47 countries representing sub-Saharan Africa. These countries include some of the poorest in the world that are heavily dependent on development assistance for health, most of which is targeted to treat communicable diseases. According to the United Nations (UN) population division, the population of sub-Saharan Africa is estimated to double by 2050 to over 1.75 billion [2]. In sub-Saharan Africa, shortages of trained health workers, limited diagnostic equipment, inadequate anti-epileptic drug supplies, cultural beliefs and social stigma contribute to the large treatment gap for epilepsy. The number of people with epilepsy, particularly children, will continue to rise as a result of projected epidemiologic and demographic changes.

In 2016, on a retrospective, descriptive and analytical study, on the files of epileptic children aged 2 to 15 years followed at the level of the Emile Badiane psychiatric center of Ziguinchor in the south of Senegal, structure of reference and epileptic treatment in the region, over a period of two years (2015 and 2016), gives us interesting results.

One hundred and forty-five (145) children including 80 boys and 65 girls were involved in this study among the 286 patients followed in the center for epilepsy, representing a pediatric incidence of 50.1%. The average age of the children was 7 years with extremes between 4 months and 15 years. The 6 to 10 year age group was the most represented. The socioeconomic level was low in 81.6% of the cases. Sixty percent (60%) of the patients came from rural areas of Casamance and the sub-region. Epilepsy was significantly associated with inbreeding ( $p=0.012$ ) and a history of familial epilepsy ( $p=0.002$ ). The average age of children at the first epilepsy attack was 4.3 years. The average consultation time at the structure was 12 months. The seizures were feverish in 10 cases (6.9%). They occurred in sleep in 11% of cases; in standby in 44.8% of cases. Generalized tonic-clonic seizures represented 73.3% of cases (Figure 1) [3].



**Figure 1.** Economic burden of epilepsy in rural ituri.

Epilepsy is a reality in pediatric settings and our area is not an exception. The incidence of 50.1% obtained from our study confirms the early onset of the disease as underlined by certain authors who report that 60% of epilepsy cases occur before the age of 20 years. Most of the risk factors for epilepsy found in the literature such as parental consanguinity, family history of the disease and neonatal infections are found in our patients [4].

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## Conclusion

The incidence of the disease is relatively high in children in our area. Epilepsy is significantly associated with inbreeding, the existence of a family history and the prerogative of neonatal infections in our environment. Strengthening prevention and early and adequate management of infections in children would help reduce this incidence in sub-Saharan Africa.

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