

Evaluation of Knowledge about Epilepsy on First Line Practitioners in Marrakesh Region

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ABSTRACT

Epilepsy represents a major public health concern as well as an economic burden for the families of the affected children, health systems and the global economy of countries. This further emphasizes the role that general practitioners can play in the management of childhood epilepsy in the face of the persistent lack of neurologists and neuro-pediatricians in our context.

In order to evaluate the knowledge and management practices of general practitioners, we carried out a descriptive and transversal study of 155 general practitioners practicing in the two healthcare sectors: public and private as well as in the urban and rural areas. The data were collected through a questionnaire.

The diagnosis of pediatric epilepsy for 85.2% of the physicians, was based on interrogation, clinical examination, EEG and sometimes imaging (CT-Scan, MRI). Our survey revealed that many physicians (23.2%) requested additional tests that were of little use in the diagnosis of epilepsy.

The results of this study highlight that further training on the management of childhood epilepsy and a better involvement of general practitioners were important attitudes to adopt towards improving the management of childhood epilepsy.

Keywords: Epilepsy, Children, General Practitioners, Knowledge, Morocco

Introduction

Childhood epilepsy is a real public health problem. It represents an economic burden for the families of affected children, health systems and the overall economy of countries. The persistent situation of the lack of human resources in the field of health in Africa in general, including Morocco, still persists. This situation logically translates into the lack of specialist doctors across all medical specialties, resulting in reduced access to basic health care and quality care. This further emphasizes the role that general practitioners can play in our health system, and the importance of providing them with all the necessary skills through continuing education, to face the demanding realities of our context [1-2].

Epilepsy affects 0.5% to 1% of children worldwide and remains the most common chronic neurological pathology in pediatrics. There has been a recent decline in its incidence in developed countries. However, low-income countries continue to suffer from it increasingly [3]. In childhood epilepsy, there is an increasing incidence in developing countries [4].

The same study emphasized the roles that general practitioners can play in the diagnosis and management of children treated for epilepsy in areas lacking pediatricians, neurologists and neuro-pediatricians [5].

Hence the importance of involving general practitioners more in the diagnosis and management of childhood epilepsy.

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To approach the medical practices of general practitioners in childhood epilepsy, we conducted a survey in the Marrakech region to describe the knowledge of general practitioners in childhood epilepsy.

Doctors & Methods

This was a descriptive and cross-sectional survey of general practitioners to assess their daily practices in diagnosing children treated for epilepsy. The target population consisted of general practitioners from the Marrakech region working in both sectors: public (hospital, health center) and private (medical office, clinic). This was an accidental sampling. A total of 200 general practitioners were interviewed during our survey. Of the 200, only 155 (77.5%) doctors agreed to complete the questionnaire. Our study assessed the knowledge and diagnostic habits of general practitioners in the Marrakech region regarding childhood epilepsy.

Data were collected through a questionnaire distributed according to the following formula in order to reduce the bias due to the investigator and to obtain an identical understanding from all the physicians interviewed: a single physician distributed the questionnaires to general practitioners in both the private and public sectors on the basis of anonymity and confidentiality. This questionnaire consisted of several questions, the majority of which were closed-ended, assessing the knowledge and diagnostic habits of practitioners in childhood epilepsy. Completion of the questionnaire was previously conditioned by the physicians' consent.

The survey data were entered into Microsoft Excel software. Data analysis was carried out using Epi-info version 2000 software at the Epidemiology Department of the Faculty of Medicine and Pharmacy of Marrakech (FMPM).

Results

For our survey, 116 doctors worked in the public sector and 39 in the private sector. Among the doctors, 100 worked in urban areas and 55 doctors in rural areas. Regarding the places of practice, 37 doctors worked in private practice, 61 worked in health centers and 57 worked in hospital structures (public hospitals, private clinics). Of the 155 doctors surveyed, only 49 (31.6%) stated that they had received continuing training on the management of childhood epilepsy.

Regarding the frequency of childhood epilepsy, 102 (65.8%) doctors admitted that it is common, 32 (20.6%) doctors answered that it is a rare pathology, and 19 (12.3%) answered that it is very common. Regarding severity, 93 (60%) thought it was severe, 57 (36.8%) doctors thought childhood epilepsy was a benign pathology. Only 6 doctors were aware of the latest "ILAE" classifications, representing 3.9% of the doctors questioned.

In our survey, only 24 (15.5%) physicians stated that they treated children with epilepsy individually and without the help of specialist physicians. There were 109 (70.3%) physicians who stated that they treated children in collaboration with specialist physicians and 58 (37.4%) physicians referred children directly to specialists.

The age group most encountered by doctors was between "2 and 6 years", reported by 69 doctors (44.5%). More than two-thirds,

or 103, of the physicians surveyed (66.5%) reported genetic etiologies as the most commonly encountered etiologies. The diagnosis of childhood epilepsy for 85.2% of physicians was based on questioning, clinical examination, EEG and sometimes imaging (CT, MRI). Our survey shows that many physicians (23.2%) requested additional tests that were of little use in diagnosing epilepsy. (Table 1,2).

Table 1: Diagnostic criteria for epilepsy

Diagnostic criteria	Number of doctors (%)
Repeatedly provoked epileptic seizures	97 (62.6%)
Recurrent unprovoked seizures	77 (49.7%)
A single epileptic seizure	23 (14.8%)

Table 2: Criteria for confirming the diagnosis

Criteria	Number of doctors (%)
Clinical-EEG-Imaging Combination	70 (45.2%)
Electro-clinic	62 (40%)
Clinical only	13 (8.4%)
Electric only	6 (3.9%)

In our survey, 93 physicians (60%) had never diagnosed focal epilepsy in a child.

Only 111 physicians (71.6%) stated that they eliminated various differential diagnoses before diagnosing childhood epilepsy. our survey, the majority of doctors (76.8%) stated that they provided follow-up care for children after the first consultation. The majority of doctors (75%) provided psychological care for both children and parents. In

Discussion

Epilepsy is a brain disease defined by the occurrence of at least two unprovoked (or reflex) seizures occurring more than 24 hours apart or one unprovoked (or reflex) seizure with a probability of having other similar seizures, after two unprovoked seizures, occurring within 10 years. Epilepsy is considered resolved in individuals who previously had an age-related epilepsy syndrome but are now over the applicable age or have remained seizure-free for the past 10 years. The pathophysiology of epilepsy is complex and composed of several intracerebral processes. It is simplified into three stages: initiation, propagation and termination of the epileptic discharge. Epilepsy is the most common chronic childhood illness. Epilepsy affects between 0.5% and 1% of children worldwide. One in 150 children suffers from epilepsy during the first 10 years of life [6].

The prevalence in sub-Saharan Africa is estimated to be 2 to 3 times higher than that recorded in industrialized countries. It varies between 7 and 14.8% according to a recent study conducted in 5 different countries. In these studies, only active epilepsy is taken into account. Generally, it varies between 5.2 and 74% depending on the regions and methods used [7]. A study carried out in Marrakech estimated that cases of childhood epilepsy represented 8.5% of patients in the pediatric department [8].

The etiologies of epilepsies are multiple, varied and result from the conjunction of genetic and acquired factors. In epilepsies of genetic origin, exogenous factors promote the expression of the disease. Genetic factors most likely govern the epileptogenic potential of structural lesions of the central nervous system [9].

Early-onset epilepsies are frequently associated with significant cognitive and behavioral impairments. Early diagnosis and management are therefore critical [10]. A seizure in a child is not synonymous with epilepsy. Therefore, it is necessary to eliminate probable differential diagnoses to avoid the erroneous prescription of antiepileptic drugs and to avoid diagnosing a serious pathology that could threaten the child's life [11].

School represents the first door open to the social scene for the child and determines his socio-professional future. However, the child treated for epilepsy is most often rejected by the school and sometimes even by other children at school. This contributes to difficulties often encountered by children treated for epilepsy [12,13].

Conclusion

Epilepsy is a chronic neurological disease, very common in the pediatric population. Its management varies depending on the type of seizure, the electroclinical syndrome, and the child's age. In light of our survey of general practitioners, we propose to involve general practitioners more in the management of childhood epilepsy, organize continuing education sessions for general practitioners, raise awareness among the public and school leaders about childhood epilepsy, educate teachers about the proper school integration of children being treated for epilepsy and create centers dedicated to childhood epilepsy.

Statement of Ethics

This study has the authorizations of Maternal and Child Hospital numbered with a Ref. (SAA No. 252/2020).

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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