



**Institute of Postgraduate Childhood Studies
Medical Studies Department**

Psychiatric Disorders in Epileptic Children

Thesis

Submitted for fulfillment of the PH. Degree

By

Sawsan Salama Said Ahmed Gad

M.B.B.Ch., M.Sc. pediatrics

Supervised By

Prof. Khaled Hussien Taman

Dr. Ahmed Raouf Ahmed

Professor of Pediatrics
Institute of Postgraduate Childhood Studies
Ain Shams University

Consultant of Pediatric Neurology
Al-Agouza Police Hospital

Dr. Manal Mohamed Mahdy Omar

Dr. Geylan Mohamed Riad

Lecturer. of Psychiatry
Institute of Postgraduate Childhood Studies
Ain Shams University

Lecturer. of clinical psychology
Helwan University

2010

List of Contents

Contents	Page No.
List of Abbreviations	I
List of Tables	III
List of Figures	V
Abstract	VI
Introduction & Aim of the work	1
Review of literature	
▪ Epilepsy	
▪ Anxiety in epilepsy	
▪ Depression in Epilepsy	
▪ Childhood Epilepsy and Attention Deficit Hyperactivity Disorder (ADHD)	
▪ Social Problems	
▪ Neuropsychological Aspects of Psychogenic Nonepileptic seizures	
▪ Treatment of Psychiatric Problems in Children with Epilepsy	
Subjects and Methods	

=====

Results	
Discussion	
Summary and Conclusion	
Recommendations	
References	
Appendices	
Arabic Summary	

=====

=====

List of Contents

Contents	Page No.
List of Abbreviations	I
List of Tables	III
List of Figures	V
Abstract	VI
Introduction & Aim of the work	1
Review of literature	
▪ Psychiatric Aspects of Epilepsy in Children	3
▪ Epilepsy	11
▪ Anxiety in epilepsy	25
▪ Depression in Epilepsy	41
▪ Attention Deficit Hyperactivity Disorder (ADHD) in Epilepsy.	49
▪ Social Problems in Epilepsy.	55
▪ Neuropsychological Aspects of Psychogenic Nonepileptic seizures	61
▪ Types of Interventions in Psychiatric Problems in Children with Epilepsy.	67

Studied Groups and Methods	77
Results	87
Discussion	105
Summary and Conclusion	118
Recommendations	123
References	126
Addenda	152
Arabic Summary	

Abstract

Childhood epilepsy is the most common neurological disease, As it is tend to become complicated with a wide range of specific psychiatric problems. It is therefore important to assess the neuropsychological abilities related to seizures.

The aim of this study was to detect psychiatric disorders (if present) in children with epilepsy.

The theoretical part of the work consists of review of epilepsy, its pathology, classification, diagnosis, course and prognosis.

Also review the differences in psychiatric aspects between children with epilepsy and healthy children, and also the path physiology of these disorders.

The practical part was performed on 100 cases and 100 healthy controls in the same age group (6-13 years) and same sex, assisted by psychometric test (CBCL).

Conclusion: psychiatric disturbance was found to be highly significant more in children with epilepsy.

On the other hand age of the child, level of mother education and EEG abnormalities have a relation to psychiatric disturbances.

Acknowledgment

Acknowledgment

First of all thanks to ALLAH

It is not just a prose; I really mean what I said.

In the first place, I would like to record my gratitude to professor Khaled Hussien Taman the Dean of Institute of Postgraduate Childhood Studies, Ain Shams University for giving me the honor of working under his supervision, and for his enthusiastic support, guidance, constructive and Caring commands.

I wish to express my great thanks, sincere gratitude and appreciation to professor Ahmed Raouf Ahmed Consultant of pediatric neurology. Who scarified a good deal of his valuable time and experience to guide me through out the whole work, I gratefully acknowledge him.

Acknowledgment

A special thanks goes to my advisor Dr. Manal Omar, Lecturer of psychiatry, as she always there to listen and to give advice. She taught me how to write academic paper, she had confidence in me when I doubted myself. Without her encouragement and constant guidance, I could not have finished this dissertation.

I am also greatly indebted to Dr. Geylan Riad, lecturer of clinical psychology. I greatly appreciate her kind assistance, generous and meticulous cooperation. NO words can possibly express my whole hearted thank fullness and appreciation to her.

Last but not least. I Can't forget to thank all staff members in the medical department in Institute of Postgraduate Childhood Studies for their kind assistance either in the out clinic section or the statistical department Mrs. Jihan Eissa Kiratam

Acknowledgment

Let me also say “Thank You” to my children and my sister for their loving support and persistent confidence in me.

Introduction

Introduction

Health, happiness, independence, and productivity are basic human desire. For children, this means achieving normal growth and development, acquiring a sense of accomplishment, developing an identity, and initiating independence. Although, over time, all children face the same developmental milestones depends on many conditioning factors (*Charron-prochownik, 2002*).

One conditioning factor that greatly influences developmental outcomes and quality of life is chronic illness (*Jackson and Vessey, 2000*). *The American Academy of Pediatrics (1993)* defines pediatric chronic diseases as illnesses that affects a person for an extended period of time, often for life, and that require medical care and attention above and beyond the normal requirements for a child or an adolescent.

Both children and adults with medical illnesses have benefited from twentieth century advances in medicine, and Cleary still more advances loom on the horizon of this century. Children who, in the past, might have died or had their physical functioning severely compromised by their illness are now living into adulthood (*Goodman, 2001*). Although

Introduction

children with chronic illness account for a large portion of the work of pediatricians, the need to identify psychosocial issues is under-recognized by physicians. They receive little training in the psychosocial issues related to chronic disease, despite the acknowledgement that these issues are major determinants of outcome (*Bernal et al., 2000*).

Aim of the work

We undertook this study in order to:

- ◆ Study the behavioral disturbances among sample of the Egyptian epileptic children.
- ◆ Detect practically psychiatric disorders and their relation to epilepsy related factors.
- ◆ To design a strategy for avoidance and management of behavioral troubles in children with epilepsy.

Review of the literatures

Epilepsy

Definition:

Epilepsy is a disorder of brain function characterized by recurring excessive neuronal discharge, manifested by transient episodes of motor, sensory or psychic dysfunctions, with or without unconsciousness or convulsive movement. The seizures is associated with marked changes in recorded electrical activity. However, no current definition of epilepsy is entirely satisfactory. Perhaps the best definition is the tendency to recurrent fits (*Appleby, 1994*)

Epilepsy is a common, and commonly misunderstood chronic medical condition of childhood.

The international league against Epilepsy (ILAE) and the international Epilepsy Bureau (IEB) came up with new definitions at (2005).

They now define epilepsy as:-

The disorder of the brain characterized by an enduring predisposition to generate epileptic seizure and by the neurobiologic, cognitive, psychological and social consequences of the condition.

Review of the literatures

The epileptic seizures as:

A transient occurrence of signs and / or symptoms due to abnormal excessive and synchronous neuronal activity in the brain (*Fisher et al., 2005*).

The new definition has sparked a hot debate. Many experts object to provoked seizures qualifying for a diagnosis of epilepsy. And they are reluctant to accept the single seizures may be sufficient for diagnosis and also including associated medical and social conditions in the definition of epilepsy (*Berghi et al., 2005, Ahmed , 2005*) .

Prevalence:

According to the world Health Organization approximately 50 million people around the world have epilepsy, more than 50% of children with epilepsy will outgrow their seizures when they mature while others may have seizures that continue into adulthood (*Science Daily, 2007*).

Epilepsy is one of the most common of the serious neurological disorders. The prevalence of active epilepsy is roughly in the range 5-16/1000 people (*Hirtz et al., 2007*).

Review of the literatures

Epilepsy approximate annual incidence rate is 40-70/100.000 in industrialized countries and 100-190/100.000 in resource-poor countries (*Sander , 2003*).

Epilepsy the (“sacred disease”, the falling sickness) is a common condition.

Over all prevalence of active convulsive epilepsy was 2.9/1000(95% children 2.6-3.2 years) and the treatment gap was 70.3% (65.9 – 74.5).(*Tansy, 2008*).

In Egypt:

- In a study of prevalence of epilepsy in school children in Elmanyal Island, the prevalence is 4.35/1000 (5/1000& 3.88/1000) (**Forayssa, 2009**).
- Prevalence was 7.2/1000 with : percentage 2:1 in a study in primary school children in Elmenia city. (*Nermin,2009*)

Classifications:

International classification of Epilepsies, Epileptic syndromes, and related seizure disorders (*Porter, 2001*).

1. Localization – related (Focal, Local , Partial)

1.1 Idiopathic (primary) (With age – related onset)

Review of the literatures

- Benign childhood epilepsy with centrotemporal spikes.
- Primary reading epilepsy.
- Childhood epilepsy with occipital paroxysms.

1.2 Symptomatic (Secondary)

- Temporal lobe epilepsies.
- Frontal lobe epilepsies
- Parietal lobe epilepsies
- Occipital lobe epilepsies
- Chronic progressive epilepsia partialis continua of childhood syndromes characterized by seizures with specific modes of precipitation.

1.3 Cryptogenic, defined by:

- Seizure type
- Clinical feature
- Etiology
- Anatomical localization.

2. Generalized

2.1 Idiopathic (primary)(with age related onset)