

Assessment of Adverse Effects of Anti Epileptic Drugs in Controlled and Uncontrolled Epileptic Patients

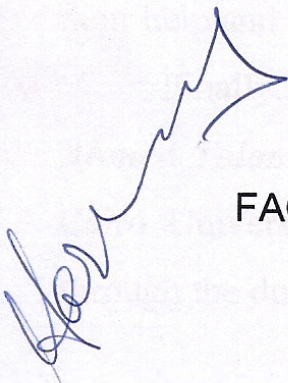
Thesis

Submitted for Partial Fulfillment of the Master Degree in
Neuropsychiatry

by

Lobna Ahmed Talaat El-Ghoneimy
(M.B., B.Ch)

Supervised by

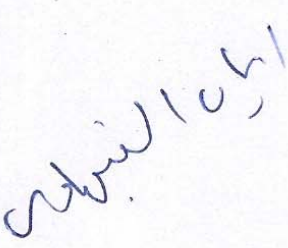


Prof. DR. Hassan Saad Hosny

PROFESSOR OF NEUROLOGY
FACULTY OF MEDECINE, CAIRO UNIVERSITY.

DR. Sandra Mohamed Ahmed

LECTURER OF NEUROLOGY
FACULTY OF MEDECINE, CAIRO UNIVERSITY.



Faculty Of Medicine
Cairo University
2013



تقرير جماعى

عن مناقشة رسالة الماجستير الخاصة بالطببيه / لبنى أحمد طلعت الغنيمى

توطئه للحصول على درجه الماجستير فى الامراض العصبيه

اجتمعت لجنة المناقشة والحكم على الرسالة المقدمه من الطبيبه /
لبنى أحمد طلعت الغنيمى توطئه للحصول على درجه الماجستير
فى الامراض العصبيه والمشكلة بقرار من مجلس الكلية والمعتد من السيد
الأستاذ الدكتور/ نائب رئيس الجامعة للدراسات العليا

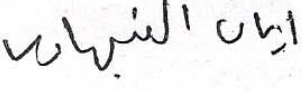
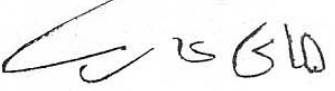
وتتكون من السادة الأساتذة :-

أ.د. حسن سعد حسنى	أستاذ الأمراض العصبية بكلية الطب
أ.د. أيمن أحمد البنهاوى	جامعة القاهرة (عن المشرفين)
أ.د. هانى محمد عارف	أستاذ الأمراض العصبية بكلية الطب
	جامعة القاهرة (ممتحن داخلى)
	أستاذ الأمراض العصبية بطب عين شمس
	(ممتحن خارجى)

وذلك بمشيئة الله تعالى يوم الاثنين الموافق ٢٠١٣/٩/٣٠ وذلك بقاعة المؤتمرات بكلية
الطب (القصر العينى) جامعة القاهرة

وشملت الدراسة المرضى المصابين بالصرع والاثار الجانبية للعقاقير المضادة
للصرع

قررت اللجنة بعد المناقشة:

أ.د. حسن سعد حسنى	أ.د. أيمن أحمد البنهاوى	أ.د. هانى محمد عارف
		

Acknowledgements

I would like to express my greatest appreciation and heartfelt thanks to **Prof. Dr. Hassan Saad Hosny**, Professor of Neurology, Faculty of Medicine, Cairo University, for his most valuable advice, kind supervision, unlimited guidance and patience.

My deepest gratitude to **Dr. Sandra M. Ahmed**, Lecturer of Neurology, Faculty of Medicine, Cairo University, without her knowledge and assistance this study would not have been successful.

I am highly indebted to **Dr. Ahmed M. Abdelalim**, Assistant Professor of Neurology, Faculty of Medicine, Cairo University and **Dr. Mohamed I. Hegazy**, Lecturer of Neurology, Faculty of Medicine, Cairo University, for their help and invaluable assistance, support and guidance.

Finally, an honorable mention goes to my father and mentor **Prof. Dr. Ahmed Talaat El-Goneimy**, Professor of Neurology, Faculty of Medicine, Cairo University, and to my family for their understanding and support through the duration of this study.

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Abstract

Background: Epilepsy is one of the most common neurological disorders. The mainstay of treatment of epilepsy is antiepileptic drugs (AEDs), often for a long duration. The primary goals of treatment of epilepsy include complete seizure remission, improvement in the quality of life (QOL), and do no harm. Adverse effects (AEs) of AEDs remain a major cause of morbidity and sometimes mortality in the course of treatment of epilepsy and considerably impact the QOL of people with epilepsy.

Aim of work: Determine the side effects profile of AEDs and attempt to relate the side effects to the prescribed doses and different clinical characteristics of epileptic patients.

Patients and Methods: Three hundred epileptic patients (110 females, 190 males) aged between 18 and 65 years were randomly selected from the epilepsy outpatient clinic. The patients were then divided according to the type of epilepsy into focal, generalized or other syndromes. The patients were then subdivided into controlled or uncontrolled and on mono- or poly-therapy. All of the patients were subjected to the 19 items adverse effects profile (AEP) instrument for complete screening of any possible known side effects of the AEDs.

Results: The AEP scoring system results, ranged from 19 to 62, with a mean of 33 ± 0.894 . The most common AEs were memory problems (42%), headache (34.7%), nervousness (33.3%), dizziness (28%), shaky hands (25.3%), and disturbed sleep (24%). One hundred sixty one patients (53.7%) were on carbamazepine with a mean dose of 800 ± 178.885 mg, 97 patients (32.3%) on phenytoin with a mean dose of 266.67 ± 51.64 mg, and 160 patients (53.3%) on valproate with a mean dose of $1.216.67 \pm 537.277$ mg. There was a statistically significant increased proportion of tiredness,

restlessness, nervousness, hair loss, blurred vision, shaky hands and weight gain in patients on valproic acid (VPA) ($P=0.019$, $P=0.013$, $P=0.005$, $P=0.058$, $P=0.058$, $P=0.000$, $P=0.004$, respectively) when comparing VPA to the other two drugs. There was a statistically increased gastrointestinal tract(GIT) upset and sleepiness, in Phenytoin users ($P=0.001$, and $P=0.018$ respectively) when compared to the other two drugs.

Conclusion:Adverse effects prevailed in certain drugs regardless of the dose. Which means that not always increasing the dose of the drug would result in an increase in the adverse effect profile. However, the use of screening measures, such as questionnaires or checklists, can result in overestimation.

List of Abbreviations

AMPA	alfa amino 3-hydroxy-5methyl-4-isoxazole propionate
AE	Adverse Effect
AEP	Adverse Effect Profile
AED	Anti Epileptic Drug
CBZ	Carbamazepine
CAE	Childhood Absence Epilepsy
CNS	Central Nervous System
CYP	Cytochrome P-450
DRESS	Drug Rash with Eosinophilia and Systemic Symptoms
EEG	Electro-Encephalogram
FDA	Food and Drug Administration
GABA	Gamma Amino Butyric Acid
GABA-T	Gamma Amino Butyric Acid Transaminase
GAD	Glutamic acid decarboxylase
GLUT-1	Glucose Transporter 1
GIT	Gastro Intestinal Tract
HRQOL	Health Related Quality of Life
HHV	Human Herpes Virus

HLA	Human Leukocyte Antigen
ILAE	International League Against Epilepsy
LEV	Levetiracetam
LFT	Liver Function Test
MRI	Magnetic Resonance Imaging
NMDA	N-methyl D-aspartate
PHT	Phenytoin
QOL	Quality of Life
SLE	Systemic Lupus Erythromatosis
SV2A	Synaptic Vesicle Protein
TSH	Thyrotropin
VPA	Valproic acid
VHE	Valproic acid Hyperammonemic encephalopathy

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Introduction and Aim of Work