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شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

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شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

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بعض الوثائق الأصلية تالفة

سامية محمد مصطفى

بالرسالة صفحات لم ترد بالأصل

ROLE OF CROSS SECTIONAL IMAGING OF THE BRAIN IN PAEDIATRIC EPILEPSY

Thesis

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To my **parents**
Who by their love and support,
make my success real

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I never forget the patients to whom we owe a lot.

KEY TO THE FIGURES' ABBREVIATIONS

AG	:	Angular gyrus
CC(B)	:	Body of corpus callosum
CC(G)	:	Genu of corpus callosum
CC(S)	:	Splenium of corpus callosum
CcS	:	Calcarine sulcus
CoS	:	Collateral sulcus
CaS	:	Callosal sulcus
CgG	:	Cingulate sulcus
CgG(I)	:	Isthmus of cingulate gyrus
CgS	:	Cingulate sulcus
CgS(MB)	:	Marginal branch of cingulate sulcus
CgS(PaB)	:	Paracentral branch of cingulate sulcus
Cn	:	Cuneus
CS	:	Central sulcus
FhG	:	Fusiform gyrus
HS	:	Hippocampal sulcus
IFG	:	Inferior frontal gyrus
IFG(OpP)	:	Opercular part of inferior frontal gyrus
IFG(OrP)	:	Orbital part of inferior frontal gyrus
IFG(TrP)	:	Triangular part of inferior frontal gyrus
IPL	:	Inferior parietal lobule
IPS	:	Intraparietal sulcus
ITG	:	Inferior temporal gyrus
ITS	:	Inferior temporal sulcus
LgG	:	Lingual gyrus
LS(AAR)	:	Anterior ascending ramus of lateral sulcus
LS(AHR)	:	Anterior horizontal ramus of lateral sulcus
LS(PR)	:	Posterior ramus of lateral sulcus
MFG	:	Middle frontal gyrus
MTG	:	Middle temporal gyrus
MTS	:	Middle temporal sulcus

PCL	:	Paracentral lobule
PCn	:	Precuneus
PHG	:	Parahippocampal gyrus
PoCG	:	Postcentral gyrus
POS	:	Parieto-occipital sulcus
PrCG	:	Precentral gyrus
PrCS	:	Precentral sulcus
SbPS	:	Subparietal sulcus
SFG	:	Superior frontal gyrus
SMG	:	Supramarginal gyrus
SPL	:	Superior parietal lobule
STG	:	Superior temporal gyrus
STS	:	Superior temporal sulcus

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Chapter I

INTRODUCTION

INTRODUCTION

THE BRAIN ANATOMY

Developmentally the brain consists of three major parts; forebrain (prosencephalon), midbrain (mesencephalon) and hindbrain (rhombencephalon). The forebrain consists of the cerebrum and the diencephalon, while the hindbrain consists of the pons, the medulla oblongata and the cerebellum.[1]

The Cerebrum:

It consists of two cerebral hemispheres connected by a mass of white matter called the corpus callosum. Each hemisphere extends from the frontal to the occipital bones, above the anterior and middle cranial fossa, and posteriorly, above the tentorium cerebelli. The hemispheres are separated by a deep cleft, the longitudinal fissure, into which projects the falx cerebri. The surface layer of each hemisphere is called the cortex and is composed of grey matter. The grey matter consists of nerve cells and the proximal portions of their processes embedded in neuroglia. The cerebral cortex is thrown into folds, or gyri, separated by fissures, or sulci. A number of the large sulci conveniently subdivide the surface of each hemisphere into lobes which are named for the bones of the cranium under which they lie.[2]

The interior of the cerebrum is formed of white matter tracts and deep grey matter (basal nuclei). The white matter tracts are classified into three types:

1. Association (intrahemispheric) fibres: They connect cortical areas in the ipsilateral hemisphere. They are divided into short and long association fibers.

2. Commissural (interhemispheric) fibres: They connect cortical areas with contralateral hemisphere. Corpus callosum is the largest commissure connecting hemispheres. It is formed of four parts, from anterior to posterior, rostrum, genu, body and splenium.

3. Projection fibers: They connect cortical or limbic areas with corpus striatum or diencephalon.

The basal nuclei include:

1. Amygdaloid body: It is located in the anterior temporal lobe.
2. Claustrum: It is a thin sheet of grey matter lateral to the external capsule and medial to the extreme capsule.
3. Corpus striatum: includes the caudate nucleus and the lentiform nucleus. The latter is formed of a medial portion, globus pallidus, and lateral portion, putamen.[3]