

# **ASSESSMENT OF THE TELOVELAR APPROACH TO FOURTH VENTRICULAR TUMORS**

## **Thesis**

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بسم الله الرحمن الرحيم

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صدق الله العظيم



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## DEDICATION

This is dedicated to my little family, Ashraf,  
Ayman, Hossam , and Youssef...

Specially dedicated to  
my dear professor Dr. Saudi Zamzam



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## LIST OF ABBREVIATIONS

5-ALA	5-aminolevulinic acid
AICA	Anterior inferior cerebellar artery
ASL	Arterial spin labeling
AVM	Arterio-venous malformation
C1	First cervical vertebra
C2	Second cervical vertebra
C3	Third cervical vertebra
CE	Contrast enhancement
CEA	Carcinoembryonic antigen
CM	Cerebellar mutism
CNS	Central nervous system
CPA	Cerebello-pontine angle
CS	Cowden's syndrome
CSF	Cerebrospinal fluid
CSOM	Chronic suppurative otitis media
CT	Computed tomography
DNA	Deoxy nucleic acid
EMA	Epithelial membrane antigen
EP	Ependymoma
ETV	Endoscopic third ventriculostomy
FLAIR	Fluid-attenuated inversion recovery
FMRI	Functional MRI
GFAP	Glial fibrillary acidic protein
GTR	Gross total resection
HMB	Hemangioblastoma
ICA	Internal carotid artery
ICP	Intracranial pressure
iMRI	Intraoperative MRI
IOUS	Intraoperative ultrasonography
IPA	Intermediate pilomyxoid astrocytomas
LD	Leptomeningeal dissemination
LDD	Lhermitte-Duclos disease
MB	Medulloblastoma
MRA	Magnetic resonance arteriography