# ROLE OF COMBINED CT AND MRI IN ASSESSMENT OF CHILD SENSORI-NEURAL HEARING LOSS

Thesis

Submitted for partial fulfillment of M.D. in Radio-diagnosis

### By

#### WALAA MOHAMED MOHAMED ABD EL LATIF

M.B.,B.Ch. (2005),Master degree(2008)
Faculty of Medicine
Ass. lecturer in Radio-diagnosis Department
Ain Shams University

### Supervised By

### PROF. Dr./ Safaa Kamal Mohamed

Professor of Radio-diagnosis Faculty of Medicine Ain Shams University

#### Ass. prof. Dr./Omnia Ahmed Kamal

Ass. Professor of Radio-diagnosis
Faculty of Medicine
Ain Shams University

#### Dr./ Merhan Ahmed Ali

Lecturer of Radio-diagnosis
Faculty of Medicine
Ain Shams University
Radio-diagnosis Department

Faculty of Medicine
Ain Shams University

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Thanks Allah Almighty, the Gracious for blessing me with such a wonderful group of professors who instructed and guided me throughout my work.

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### Dedication

I would like to dedicate this Thesis to my **Father** and my **Sunshine Mother**; to them I will never find adequate words to express my gratitude.

Also my beloved family, especially my Husband for dealing so patiently, tactfully during this thesis and to my lovely kids.



### **LIST OF ABBREVIATIONS**

2D : Two-dimensional

3D : three-dimensional

AICA : anterior inferior cerebellar artery

AT : apical turn of the cochlea

BCNC : bony cochlear nerve canal

bFFE : balanced fast field echo techniques

BT : basal turn of the cochlea

CA : cochlear aqueduct

CHARGE : coloboma, heart disease, atresia choanae, retarded growth

and development, genital abnormalities, and ear anomalies

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SNHL : Sensorineural hearing loss

SSC : semicircular canals

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SSFP : steady-state free precession techniques

ST : scala tympani

SV : scala vestibuli

TE : time to echo

TORCH : toxoplasmosis, rubella, cytomegalovirus, herpes simplex virus,

and congenital syphilis

TR : time to return

trueFISP : true free induction with steady precession techniques

VA : vestibular aqueduct

Ve : vestibule

VII : facial nerve,

VIIIc : cochlear nerve,

VIIIvi : inferior division of vestibular nerve

VIIIvs : superior division of vestibular nerve,

VR : volume-rendered

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