## **Contents**

1 Review of Literature	1
Up to the Early Twentieth Century	1
Recent Times	3
Localization of the Disturbance	4
Central	4
Peripheral	6
Aetiological Basis for the Disturbance	11
Role of Exogenous Factors	11
Summary	17
Localization	17
Aetiological Basis	18
2 Clinical Diagnosis and Audiometric Studies	21
Clinical Dignosis	21
History	21
Examination of the Ear	22
Clinical Speech Tests	22
Tuning Fork Methods	23
Audiogram	23
Tympanometry	23
X-Rays	25
Electrophysiology	25
Calorics and Electronystagmography	25
Disorders of the External Ear	25
Disorders of the Middle Ear	26
Disorders of the Inner Ear	26
Presbyacusis	26
Noise Induced Hearing Loss	27
Ototoxicity	27
Bone Lesions of the Otic Capsule	27
Acoustic Neuroma	27
Tinnitus	27
	~ /



xii Contents

Audiometric Studies	28 29 29
Environmental Conditions	41
2 Electronical	
3 Electrophysiology (In collaboration with S.M. Mason)	47 47
Extratympanic Electrocochleography	48
Detailed Investigation of ABR; Preliminary Investigation of	40
ECochG	48
Procedure	48
Results	49
Discussion	57
Summary	59
Simultaneous Recordings of ABR and ECochG: Detailed	
Investigation of ECochG Components	59
Procedure	60
Results	62
Discussion	71
Conclusions	75
Summary	75
Stimulus Rate Effects	75
Procedure	75 76
Results	76
Discussion	- 70 - 80
Discussion	OL
4 Histopathological Changes	85
Perfusion – Fixation and Slicing of Inner Ear	86 86
Staining of Surface Preparations	87
Preliminary Survey of Morphological Changes in Elderly	07
Cochleas	88
Procedure	88
Results	89
Discussion	90
Quantitative Analysis of Hair Cell Changes	95
Procedure	95
Results	97
Discussion	100
Summary of Histopathological Changes	101

Co	Contents		
5	Summing-up	103	
Sı	ıbject Index	105	