

1. Record Nr.	UNINA9910743253403321
Autore	Sui Ruifang
Titolo	Practical visual electrophysiological examination // Ruifang Sui, Fu Tang, and Minglian Zhang
Pubbl/distr/stampa	Singapore : , : Springer, , [2022] ©2022
ISBN	981-16-8909-1 981-16-8910-5
Descrizione fisica	1 online resource (169 pages)
Disciplina	617.71
Soggetti	Eye - Endoscopic surgery Eye - Evolution
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Contents -- About the Authors -- List of Abbreviations -- 1: Visual Electrophysiology Summary -- 1.1 Visual Electrophysiology Basic Mechanism and Features -- 1.1.1 Basic Principle -- 1.1.2 Clinical Importance -- 1.2 Classification of Visual Electrophysiology -- 1.2.1 Basic Classification -- 1.2.2 Classification of Traditional Visual Electrophysiology -- 1.2.3 Classification of Multifocal Visual Electrophysiology -- 1.3 Visual Electrophysiology Clinical Application Principles -- 1.3.1 Overall Check -- 1.3.2 Combined with Other Clinical Results -- 1.3.3 Binocular Contrast -- 1.4 Visual Electrophysiology International Standards -- 1.4.1 ISCEV Standards -- 1.4.2 Revision of the ISCEV Standards -- 1.4.3 The Relation Between the Book and ISCEV Standards -- 2: Visual Electrophysiology Examination Equipment -- 2.1 Visual Electrophysiology Hardware Compositions -- 2.2 Visual Electrophysiology Stimulators -- 2.2.1 Stimulator Classification -- 2.2.2 Full-Field Ganzfeld -- 2.2.3 Graphic Stimulator -- 2.2.3.1 CRT Graphic Stimulator -- 2.2.3.2 LED Graphic Stimulator -- 2.2.3.3 LCD Graphic Stimulator -- 2.2.3.4 SLO Graphic Stimulator -- 2.2.4 Stimulators for Infants -- 2.2.4.1 The Stimulator Used for Infants and Bedridden Patients -- 2.2.4.2 Handheld Graphic Stimulator -- 2.2.4.3 Instant Control Babyflash Stimulator -- 2.2.4.4 Mini-Ganzfeld

Handheld Flash Stimulator -- 2.3 Visual Electrophysiology Electrodes -- 2.3.1 Skin Electrode -- 2.3.1.1 Gold Cup Electrode or Silver Cup Electrode -- 2.3.1.2 Infant Skin Electrode -- 2.3.1.3 Ear Clip Gold or Silver Cup Electrode -- 2.3.2 Corneal Electrode -- 2.3.2.1 ERG-Jet Corneal Contact Lens Electrode -- 2.3.2.2 DTL (Dawson, Trick, and Litzkow) Electrode -- 2.3.2.2.1 DTL Conductive Fiber Electrode -- 2.3.2.2.2 Roll-Type DTL Electrode -- 2.3.2.3 Gold Foil Electrode. 2.3.2.4 HK (Hawlina, Konec) Conductive Metal Ring Electrode -- 2.3.2.5 Burian Allen Electrode (B-A Electrode) -- 2.3.2.6 Kooyman Electrode -- 3: Visual Electrophysiology Result Reading Key Points -- 3.1 Visual Electrophysiology Result Reading Principles -- 3.1.1 The Form, Influencing Factors, and Characteristics of Visual Electrophysiological Examination Results -- 3.1.1.1 The Results Presentation Form -- 3.1.1.2 Factors Influencing Visual Electrophysiological Examination -- 3.1.1.3 Characteristics of Visual Electrophysiological Examination -- 3.1.1.3.1 Variation Between the Examination Rooms -- 3.1.1.3.2 Variation with Age -- 3.1.1.3.3 Variation Among Individuals -- 3.1.2 Result Reading Key Points of Visual Electrophysiological Examination -- 3.2 VEP Basic Features and Report Reading Key Points -- 3.2.1 VEP and EEG -- 3.2.2 Role and Classification of VEP -- 3.2.3 VEP Application Range and Stimulation Mode -- 3.2.3.1 PVEP Application Range and Stimulation Mode -- 3.2.3.2 PVEP Application Range and Stimulation Mode -- 3.2.4 PVEP Versus FVEP -- 3.2.5 VEP Scope of Application -- 3.2.5.1 Optic Neuropathy -- 3.2.5.2 Unexplained Loss of Vision -- 3.2.5.3 Glaucoma -- 3.2.5.4 Amblyopia -- 3.2.5.5 Refracting Media Opacity -- 3.2.6 Examples of VEP Clinical Reports and Key Points of Reading Diagrams -- 3.2.6.1 Normal PVEP -- 3.2.6.2 Abnormal PVEP -- 3.2.6.3 Normal FVEP -- 3.2.6.4 Abnormal FVEP -- 3.3 ffERG Basic Features and Report Reading Key Points -- 3.3.1 ffERG Basic Process and Signal Origin -- 3.3.2 ffERG Active Electrode Selection -- 3.3.3 ffERG Basic Waveform -- 3.3.4 ffERG New International Standard Changes -- 3.3.5 ffERG Normal and Abnormal Waveform Contrast -- 3.3.5.1 Dark-Adapted 0.01 ERG Normal Versus Abnormal Waveforms -- 3.3.5.2 Dark-Adapted 3.0 ERG Normal and Abnormal Waveform Contrast. 3.3.5.3 Dark-Adapted 3.0 Oscillation Potential Normal and Abnormal Waveform Contrast -- 3.3.5.4 Light Adapted 3.0 ERG Normal and Abnormal Waveform Contrast -- 3.3.5.5 Light Adapted 30 Hz Flicker ERG Normal and Abnormal Waveform Contrast -- 3.3.6 ffERG Clinical Features -- 3.3.7 ffERG Scope of Application -- 3.3.7.1 Hereditary Retinopathy -- 3.3.7.2 Retinal Vascular Diseases -- 3.3.7.3 Preoperative Cataract Examination -- 3.3.7.4 Assessment of Retinal Function in Infants -- 3.3.7.5 Retinal Toxicity Drug Monitoring -- 3.3.8 Examples of Normal ffERG Clinical Report and Key Points of Reading the Diagram -- 3.3.9 Examples of Abnormal ffERG Clinical Report and Key Points of Reading the Diagram -- 3.4 PERG Basic Features and Report Reading Key Points -- 3.4.1 PERG Basic Process and Its Clinical Significance -- 3.4.2 PERG Waveform -- 3.4.3 PERG Scope of Application -- 3.4.3.1 Macular Disease -- 3.4.3.2 Hereditary Retinopathy and Retinal Vascular Diseases -- 3.4.3.3 Optic Nerve Disease (e.g., Glaucoma) -- 3.4.3.4 Lesion Localization -- 3.4.4 Examples of Normal PERG Clinical Reports and Key Points of Reports Reading -- 3.4.5 Examples of Abnormal PERG Clinical Report and Key Points of Reading the Diagram -- 3.5 mfERG Basic Features and Report Reading Key Points -- 3.5.1 mfERG Basic Concept -- 3.5.2 Three ERGs Comparisons -- 3.5.3 Scope of Application for mfERG -- 3.5.3.1 Quantitative Evaluation of the Therapeutic Effect of Fundus Diseases --

3.5.3.2 Hereditary Retinopathy -- 3.5.3.3 Macular Degeneration --
3.5.3.4 Retinal Vasculopathy -- 3.5.3.5 Retinal Toxicity Drug
Monitoring -- 3.5.3.6 Preoperative Assessment of Retinal Function for
Cataract -- 3.5.4 Examples of Normal mfERG Clinical Reports and Key
Points of Reading -- 3.5.5 Examples of Clinical Reports of mfERG
Abnormalities and Key Points of Image Reading.
3.6 EOG Basic Features and Report Reading Key Points -- 3.6.1 EOG
Recording Process and New Changes in International Standards --
3.6.2 Application Scope of EOG -- 3.6.2.1 Best Disease (Vitelliform
Macular Dystrophy) -- 3.6.2.2 Pigment Epithelial Lesion -- 3.6.2.3
Choroid Lesions -- 3.6.3 Examples of Normal EOG Clinical Reports
and Key Points of Reading -- 3.6.4 Examples of Abnormal EOG Clinical
Reports and Key Points of Reading -- 4: Visual Electrophysiology
Clinical Cases -- 4.1 Visual Electrophysiology Examination Selections
and Application Scope -- 4.1.1 Visual Electrophysiology Examination
Selections Protocol -- 4.1.2 Application Scope of Visual
Electrophysiology -- 4.2 Optic Neuropathy -- 4.2.1 Optic Nerve
Demyelination -- 4.2.2 Degeneration of the Optic Nerve -- 4.3 ROP
-- 4.4 Inherited Retinopathy -- 4.4.1 Stargardt's Disease -- 4.4.2
Bull's Eye Maculopathy -- 4.4.3 Best Vitelliform Macular Dystrophy --
4.4.4 Congenital Stationary Night Blindness -- 4.4.5 X-Linked Juvenile
Retinoschisis -- 4.4.6 Retinitis Pigmentosa -- 4.4.7 Occult Macular
Dystrophy -- 4.5 Acquired Retinopathy -- 4.5.1 Diabetic Retinopathy
-- 4.5.2 Central Retinal Artery Occlusion -- 4.5.3 Central Retinal Vein
Occlusion -- 4.5.4 Macular Hole -- 4.5.5 Age-Related Macular
Degeneration -- 4.5.6 Acute Zonal Occult Outer Retinopathy -- 4.6
Toxic Retinopathy -- 4.7 Refractive Media Opacity -- 4.8 Glaucoma --
4.8.1 Glaucoma Steady-State PERG -- 4.8.2 Glaucoma Transient-State
PERG -- 4.8.3 Glaucoma PhNR ERG -- 4.9 Amblyopia -- 4.10 Eye
Diseases Judicial Expertise -- 4.11 Eye Diseases Visual
Electrophysiological Examinations Selection -- 5: Visual
Electrophysiology Equipment Install and Operation -- 5.1 Visual
Electrophysiology Equipment Install -- 5.1.1 Installation of Ground
Wires -- 5.1.2 Inspection Room Requirements and Layout.
5.2 PVEP Operation Steps and Key Points -- 5.2.1 PVEP Examination
for Adult -- 5.2.1.1 Examination of Environmental Requirements --
5.2.1.2 Preexamination Preparation -- 5.2.1.2.1 Patient Preparation --
5.2.1.2.2 Examination Distance -- 5.2.1.3 PVEP Examination Operation
Steps -- 5.2.1.3.1 Open PVEP Program -- 5.2.1.3.2 Input Patient
Information -- 5.2.1.3.3 Electrodes Placement -- 5.2.1.3.3.1
Determine the Positions of Electrodes Placement -- 5.2.1.3.3.2 Clean
the Skin -- 5.2.1.3.3.3 Connect the Electrode to the Amplifier --
5.2.1.3.3.4 Electrodes Placement -- 5.2.1.3.4 Impedance Measurement
-- 5.2.1.3.5 Electrode Fastened -- 5.2.1.3.6 Monocular Cover --
5.2.1.3.7 Refractive Correct -- 5.2.1.3.8 PVEP Examination --
5.2.1.3.8.1 PVEP Examination of Right Eye -- 5.2.1.3.8.2 PVEP
Examination of Left Eye -- 5.2.1.3.9 Results Analyses -- 5.2.2 PVEP
Examination for Children -- 5.2.2.1 Special Stimulator -- 5.2.2.1.1
Cartoon Fixation Pattern Suitable for Children -- 5.2.2.1.2 Handheld
Graphic Stimulator -- 5.2.2.2 Special Skin Electrode -- 5.3 FVEP
Operation Steps and Key Points -- 5.3.1 FVEP Examinations for Adult
-- 5.3.2 FVEP Examinations for Infant and Young Children -- 5.3.2.1
Handheld Controlled Infant Flash Stimulator -- 5.3.2.2 Flat Full-Field
Ganzfeld Stimulator -- 5.3.2.3 Mini-Ganzfeld Handheld Flash
Stimulator -- 5.3.2.4 Eye Mask Stimulator -- 5.3.2.5 Kooyman
Electrode Stimulator -- 5.4 ffERG Operation Steps and Key Points --
5.4.1 ffERG Electrode Operation Points and Notes -- 5.4.2 Prepare
Before ffERG Examination -- 5.4.3 ffERG Examination Operation Steps

-- 5.4.4 ffERG Result Analysis and Marker Adjustment -- 5.4.5 ffERG Examination for Infants and Young Children -- 5.4.5.1 Examination Characteristics -- 5.4.5.2 Anesthesia -- 5.4.5.3 Electrode -- 5.4.5.4 Repeating Time -- 5.4.5.5 Stimulators.
5.5 PERG Operation Steps and Key Points.
