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Nota di contenuto	Intro -- Preface -- Contents -- Contributors -- 1: Definitions, Terminology, and Classification -- Clinical Classification -- Middle Ear Effusions -- Histopathological Classification -- Complications and Sequelae -- The Concept of Overall Involvement -- References -- 2: Otitis Media: Basic Concepts and Fundamentals -- Introduction -- Classification and Definitions -- Clinical Classification -- Middle Ear Effusions -- Histopathological Classification -- Basic Concepts -- Development, Anatomy, and Physiology of the Middle Ear -- Phylogenetic Evolution of the Middle Ear -- Embryology -- The Middle Ear Cleft -- The Otic Capsule -- The Ossicles -- Anatomy -- The Middle Ear Cleft -- The Eustachian Tube -- Tubal Physiology -- Ventilation of the Middle Ear and the Mastoid -- Drainage -- Protection -- Aeration of the Middle Ear Cleft -- Epidemiology -- References -- 3: Otitis Media and Human Efforts to Deal with It Through Time -- Introduction -- Early Descriptions -- Paleopathological Evidence of Otitis Media -- Early Surgical Approaches -- Summary -- References -- 4: Development and Anatomy of the Human Middle Ear -- Introduction -- Part 1: Development of the Middle Ear -- The Middle Ear Cavity -- The Tympanic Membrane and the External Auditory Meatus (EAM) -- Eustachian Tube Development -- Muscles

of the Eustachian Tube -- Middle Ear Ossicle Development -- Ossicular Embryology in More Detail -- Middle Ear Muscle Development -- Temporal Bone Development -- The Otic Capsule -- The Tympanic Ring -- The Mastoid -- Middle Ear Development and Otitis Media -- Part 2: Anatomy of the Adult Middle Ear -- The Tympanic Cavity -- The Tympanic Membrane -- The Eustachian Tube -- Functions of the Eustachian Tube -- The Ossicular Chain -- Middle Ear Muscles -- The Nerves of the Middle Ear -- The Mastoid Complex -- Conclusions -- References.

5: Normal Histology of the Eustachian Tube, Middle Ear, and Mastoid Complex: The Mucoperiosteum Concept -- Introduction -- The Epithelium -- The Connective Tissue -- The Periosteum -- The Tympanic Membrane -- The Eustachian Tube -- The Round-Window Membrane -- The Otitis Media Process -- Epithelial Changes -- The Connective Tissue and Periosteal Changes -- Effusion Formation -- Changes in the Mucosa as a Whole -- Complications and Sequelae -- References -- Further Reading -- 6: Understanding the Aeration Avenues of the Middle Ear with the Aid of the Endoscope -- Introduction -- Ventilation Pathways -- Anatomy of the Epitympanic Diaphragm (Fig. 6.1) -- Ventilation of the Upper Unit -- Ventilation of the Lower Unit -- The Role of the Mastoid and Transmucosal Gas Exchange -- Blockage of the Ventilation Pathways -- Selective Epitympanic Dysventilation Syndrome -- Selective Dysventilation of the Mesotympanum -- References -- 7: Regulated Balance of Pressure Variations in the Temporal Pneumatic Spaces -- Brief Basic and Morpho-Functional Quotes -- Gas Exchanges -- Morphological Structures -- What Happens in the Mucosa? -- The Neural Regulating System: The Isobaric System of the Middle Ear Cleft -- Barosensors Located in the Middle Ear Cleft -- Barosensors Located in the Rhinopharynx -- The "Neuronal Reflex Arc" of the Isobaric System of the Middle Ear Cleft (Fig. 7.1) -- References -- 8: The Role of Immunity in the Development of Otitis Media -- Part I: The Role of Innate and Adaptive Immunity in Otitis Media -- Innate Immunity -- Epithelial and Chemical Barriers -- The Complement System -- Cells -- Adaptive Immune Responses -- Humoral Immunity -- Cellular Immunity -- Part II: The Ear Microbiota -- References -- 9: When to Suspect and How to Evaluate Immune Deficiencies in Otitis Media -- Part I: General Features of Inborn Errors of Immunity (IEI). Part II: When to Suspect IEI in Patients with Recurrent Otitis Media -- Part III: IEI Presenting with Otitis Media -- Antibody Deficiencies -- Quantity Defects -- Functional Defects: Specific Antibody Deficiency -- Inborn Errors of the Complement System -- Phagocytic Defects -- Congenital Neutropenia -- Chronic Granulomatous Disease (CGD) -- Combined Immunodeficiencies (CIDs) -- Part IV: How to Evaluate IEI in Recurrent Otitis Media Cases -- References -- 10: Genetics and Otitis Media -- Introduction -- Human DNA Studies -- Heritability -- Genetic Linkage Studies -- 19q13.42-q13.43 -- 10q26.3 -- 10q22. 3 -- Candidate Gene Association Studies -- Genome-Wide Association Studies (GWASs) -- Exome Sequencing -- Mouse DNA Studies -- Mice with Craniofacial Abnormalities -- Studies of Innate Immune Responses in Mice -- RNA Studies -- mRNAs -- MicroRNAs (miRs) -- Future Directions -- References -- 11: Predictive Medicine in Otitis Media -- Introduction -- Otitis Media Omics -- Genomics -- Heritability Studies -- Approaches to Studying the Genetics of a Common Disease -- Candidate Gene Association Studies in OM -- Linkage Studies in Families -- Genome-Wide Association Studies -- Epigenomics -- Transcriptomics -- Proteomics, Lipidomics, and Glycomics -- Microbiomics -- AOM -- OME -- The NP -- CSOM -- Exposomics --

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Contraindications to Treatment with Kinetube -- Methods of Treatment with Kinetube: -- Criteria for Assessing the Result -- Conclusion -- References -- 18: Drug Delivery Across the Intact Tympanic Membrane: Methods, Mechanisms and Potential Impact -- Diseases of the Middle Ear -- Phage Display Reveals Rare Peptides that Can Cross the Intact TM -- Trans-TM Phage Transport Is Active -- Additional Amino Acids Can Increase Transport -- Trans-TM Peptide Phage Do Not Damage the Middle or Inner Ear -- Peptides Mediate Transport Across the Human TM -- Trans-TM Peptides Cross the TM Independent of Phage -- Transport Occurs Via Transcytosis -- Potential for Noninvasive Therapeutic Delivery -- Future Directions -- Conclusions -- References -- 19: Viral Otitis Media and Acute Otitis Media and Recurrent Acute Otitis Media. An Evidence-Based Approach -- Introduction -- Definitions -- Risk Factors for Acute and Recurrent Acute Otitis Media -- Host-Associated Risk Factors -- Allergy -- Craniofacial Abnormalities -- Gastroesophageal Reflux (GER) -- Adenoids -- Genetic Susceptibility -- Environmental Risk Factors -- Upper Respiratory Tract Infections (URTI) -- Daycare Center Attendance -- Family Size (Siblings) -- Passive Smoking -- Breastfeeding -- Use

of Pacifier -- Diagnosis of Acute Otitis Media -- Treatment of Recurrent Acute Otitis Media -- Bacteriology and Antibiotics in RAOM -- Treatment of AOM Episode -- Prophylactic Treatment of Recurrent AOM -- Antibiotic Prophylaxis -- Vaccines -- Other Medical Treatments -- Surgical Prophylactic Treatment of RAOM -- Ventilation Tubes -- Adenoidectomy -- Conclusion -- References -- 20: The Microbiology of Otitis Media, Biofilms and Its Implication in the Clinical Treatment -- The Role of Viruses in the Etiopathogenesis of AOM -- Bacteria in AOM and rAOM -- Role of Pneumococcal Conjugate Vaccines -- The Role of Bacteria in COME.

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#### Sommario/riassunto

This textbook presents a broad approach to otitis media ranging from the basic to the advanced, and comprehensively reviews the diagnosis, treatment, management, and complications of patients with infections of the middle ear (OM). It has been proven that children whose hearing has been affected by otitis media suffer academically. Since their hearing is impaired, their scholastic performance deteriorates, leading to multiple health and social problems. This in turn has a cascading effect on the child's ability to perform and cope. Quite often these problems are silent and go unrecognized and misdiagnosed. The socioeconomic impact of otitis media is profound and can deeply and adversely impact a child's growth and development if not diagnosed correctly and in a timely manner. The textbook starts by covering the basics, including chapters on classification and terminology, anatomy and embryological development of the inner ear, the immune system and the inner ear, inflammation and infection, genetic predisposition, current treatment strategies including surgical and non-surgical approaches, and hearing devices. Following chapters review the current and future state of the art in OM, including chapters on tympanoplasty, temporal bone cholesteatomas, advanced hearing and balance evaluations, advanced imaging evaluations, and mastoidectomy. Textbook of Otitis Media will be a go-to resource for otorhinolaryngology residents and fellows, pediatricians, ENT surgeons, consultants, nurses, and audiologists.

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