A guide through middle ear compartments

Color Atlas of the Anatomy and Pathology of the Epitympanum

Promoting an exchange of scientific information between the different linguistic communities of Europe and encouraging mutual understanding on a wide range of important issues.
Color Atlas of the Anatomy and Pathology of the Epitympanum

This Atlas gives a detailed documentation of the superior compartments of the middle ear. New microdissection approaches have been developed, most importantly anterior microdissection. In addition to the tympanic cavity, this approach allows a direct view into the anterior membrane of Prussak's space, the anterior surface of the tensor fold, and the supratubal recess, areas not explored earlier. The regular and hitherto unknown auxiliary aeration and drainage pathways are shown in detail. Aeration of Prussak's space is documented using both microdissection and serial sections; these pathways from the mesotympanum or from the lower lateral attic are independent of the tympanic isthmus. The pathology caused by chronic inflammation on the aeration and drainage routes is also documented, and new surgical microdissection methods for removal of the tensor fold are described.

This Atlas is invaluable in the temporal bone laboratory for all residents learning anatomy and pathology of the middle ear compartments, and for the experienced otologist the photographic documentation gives reliable evidence of the variable structures in the epitympanic compartments.

Fields of Interest: Otorhinolaryngology, Audiology, Histology, Pathology, Pediatrics

Introduction and General Review
- Development of the concept of epitympanum
- Early data of the soft tissues in the epitympanum
- Fetal development of epitympanic folds and compartments
- Tensor Fold • Lateral Incudomalleal Fold • Chordal Fold • Other Duplicate Folds • Tympanic Isthmus • Development of Prussak's Space
- Contemporary Concepts of the Anatomy of the Epitympanum

Material and Methods
- Anatomy and Pathology of the Epitympanum and Supratubal Recess
- Epitympanic Diaphragm
- Normal Anatomy of Prussak's Space (with the Lateral Mallear Space)
- Microdissection • Serial Sections
- Pathology of Prussak's Space and the Lateral Mallear Space
- Microdissection • Serial Sections
- Cholesteatoma in Prussak's Space
- Large Epitympanic Compartments
- Posterior Epitympanum
- Anterior Epitympanum
- Supratubal Recess (Space)
- References

Part 2: Pathology Related to Amniotic Fluid Cellular Content and Superimposed Infection
- Temporal Bones from 2- to 4-Month-Old Infants
- Compartments above the Epitympanic Diaphragm and the Mastoid Antrum
- Tensor Fold and Supratubal Recess
- Lateral Mallear Space and Lateral Attic
- Prussak's Space and Its Aeration Pathways
- Tympanic Isthmus and Posterior Epitympanum
- Tympanic Sinus and Round Window Niche
- Eustachian Tube
- Elements Specific to Amniotic Fluid Cellular Content
- Mastoid Pneumatization
- Comment
- Temporal Bones from 5- to 23-Month-Old Infants
- Case 1 • Case 2 • Case 3 • Case 4 • Case 5
- Elements Specific to Amniotic Fluid Cellular Content
- Mastoid Pneumatization

Comment
- General Comments
- Histological Considerations regarding Amniotic Fluid Cellular Content
- Mastoid Pneumatization
- Clinical Considerations
- References

Part 3: Microsurgical Approaches to Inflammatory Ear Disease
- Temporal Bones from 2- to 4-Month-Old Infants

Intervention
- Early Attempts to Improve Epitympanic Aeration
- Microsurgical Methods in Surgery for Retraction Pockets
- Surgery for Incipient Retraction Pockets
- Surgery for Established Retraction Pockets
- Frontolateral Atticotomy
- Extensive Attic and Mesotympanic Disease in Chronic Otitis media
- Spread of Cholesteatoma from Prussak's Space
- Posterior Route
- Inferior Central Route
- Superior Route
- Anterior Route
- Final Remarks
- References
- Subject Index