Congenital lesions of the temporal bone made easy

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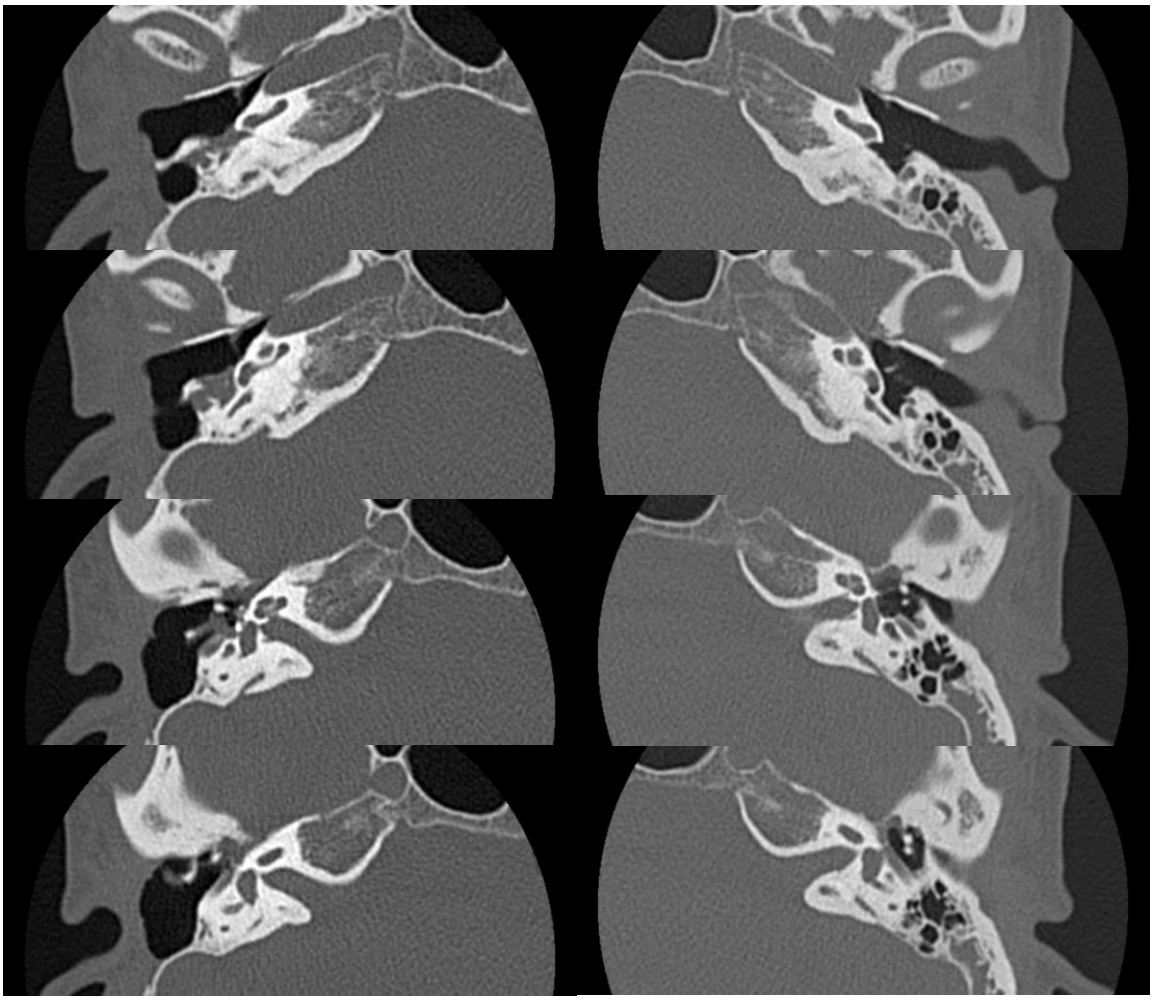
Dr. Verbist is a head and neck (H&N) and neuroradiologist at the Leiden University Medical and has a research affiliation with Radboud University Medical Centre Nijmegen in the Netherlands. She received her MD degree from the Catholic University of Leuven, Belgium and completed her residency at the University Hospital in Leuven. She spent visiting fellowships in H&N radiology at the University Florida, Gainesville and the Oregon Health and Science University in Portland, USA. She obtained her PhD from the University of Leiden. A few years later she received a travelling scientist stipend at the University of Washington. Her clinical work and research are dedicated to head and neck radiology with a focus on neurotology and oncology. Committed to education she has organized several national and international courses, given numerous lectures inside and outside Europe and has written several book chapters in the field of H&N radiology. Previously she was editor of Eurorad for head and neck.
Currently she serves in various committees of radiological societies: member of the Programme Planning Committee for ECR, member of the Executive Committee of the European Society of Head and Neck radiology and president of the H&N radiology section of the Dutch Society of Radiology.

Learning Objectives

1. To briefly review the relevant anatomy and embryology of the external auditory canal, middle ear, inner ear and internal auditory canal.
2. To discuss the most commonly used classifications of congenital inner ear anomalies.
3. To present external auditory canal stenosis and associated middle ear changes, as well as malformations of the inner ear and internal auditory canal
4. To describe the imaging findings that have an impact on the surgical approach and that should be mentioned in a clinically relevant radiological report

Teaser

Unilateral congenital SNHL



Test Your Knowledge

1. Affected structures in aural atresia are derived from the …high SI on T1 / high SI on T2/ high SI on b1000 images / low SI on ADC maps
   a. first branchial arch
   b. first and second branchial arch
   c. first, second and third branchial arch
   d. first and second branchial arch and otocyst

2. What is the most crucial information to determine feasibility of surgical repair in aural atresia according to Jaehrsdoerfer?
   a. dysplasia of the manubrium of the malleus
   b. presence of the stapes
   c. pneumatization of the mastoid
   d. size of the middle ear cavity

3. What is the term used for Mondini malformation in the Sennaroglu classification?
   a. labyrinthine aplasia
   b. incomplete partitioning type 1
   c. incomplete partitioning type 2
   d. incomplete partitioning type 3

4. In which malformation should Auditory Brainstem Implantation be considered instead of Cochlear Implantation?
   a. common cavity
   b. hypoplasia type 4
   c. incomplete partitioning type 3
   d. labyrinthine aplasia

5. The normal size of the cochlear aperture is …
   a. 0.5mm
   b. 1mm
   c. 2mm
   d. 3mm