



KARNATAKA RADIOLOGY EDUCATION PROGRAM

CASE PRESENTATION - CASE 3

CASE OF MONDINI MALFORMATION

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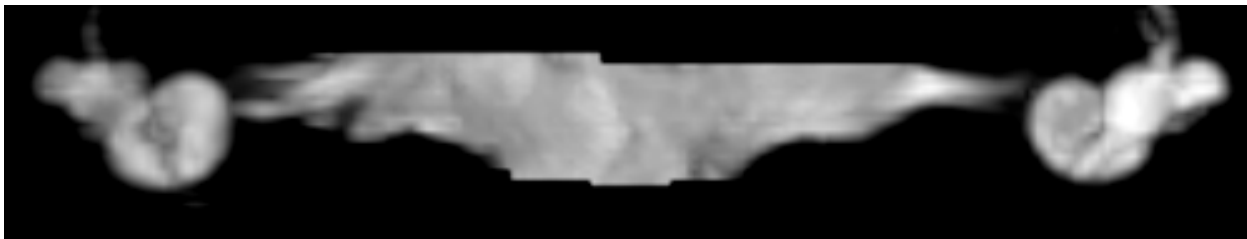
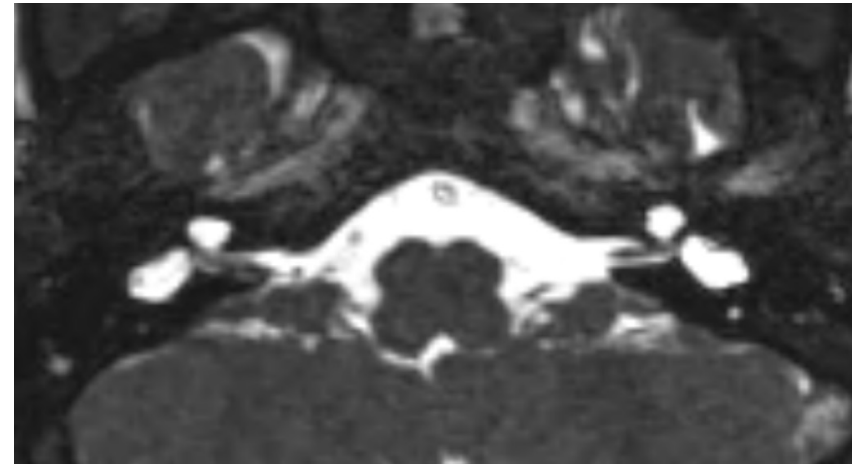
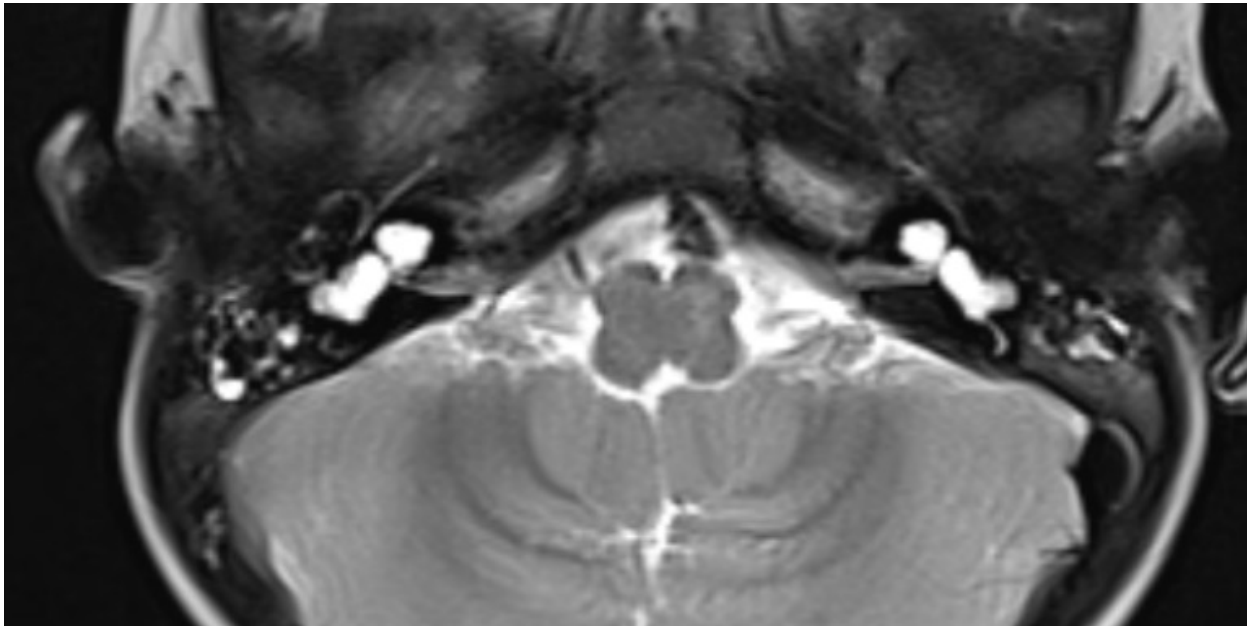
J.N.MEDICAL COLLEGE ,BELAGAVI

CASE 3

- 3 yrs old female
- C/O Bilateral profound hearing loss since birth
- No significant birth history

CASE 3

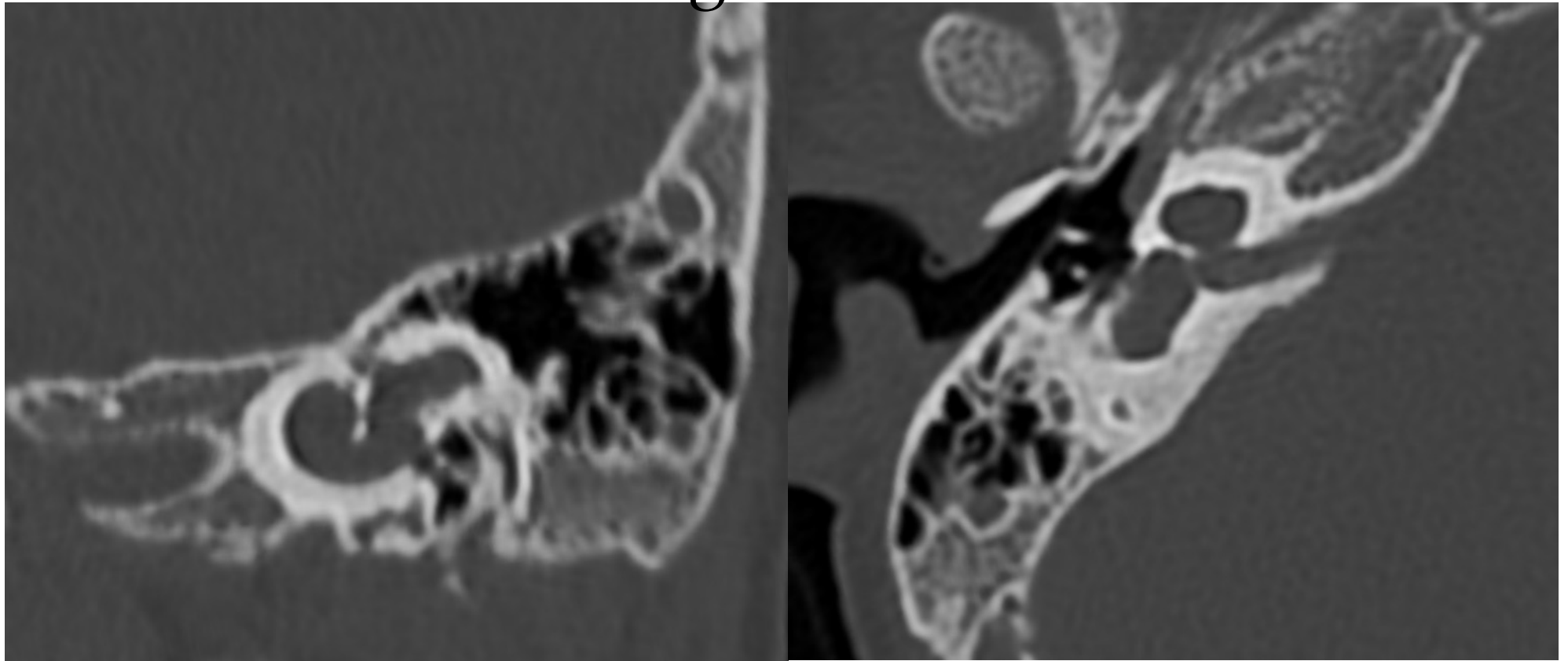
Cochlear incomplete partition type I Mondini malformation



MRI FINDINGS –

1. Abnormal cochlear turns -
 - only 1.0 turns (instead of the normal 2.5 turns)
2. Enlarged vestibule
3. Vestibulocochlear nerve appears normal

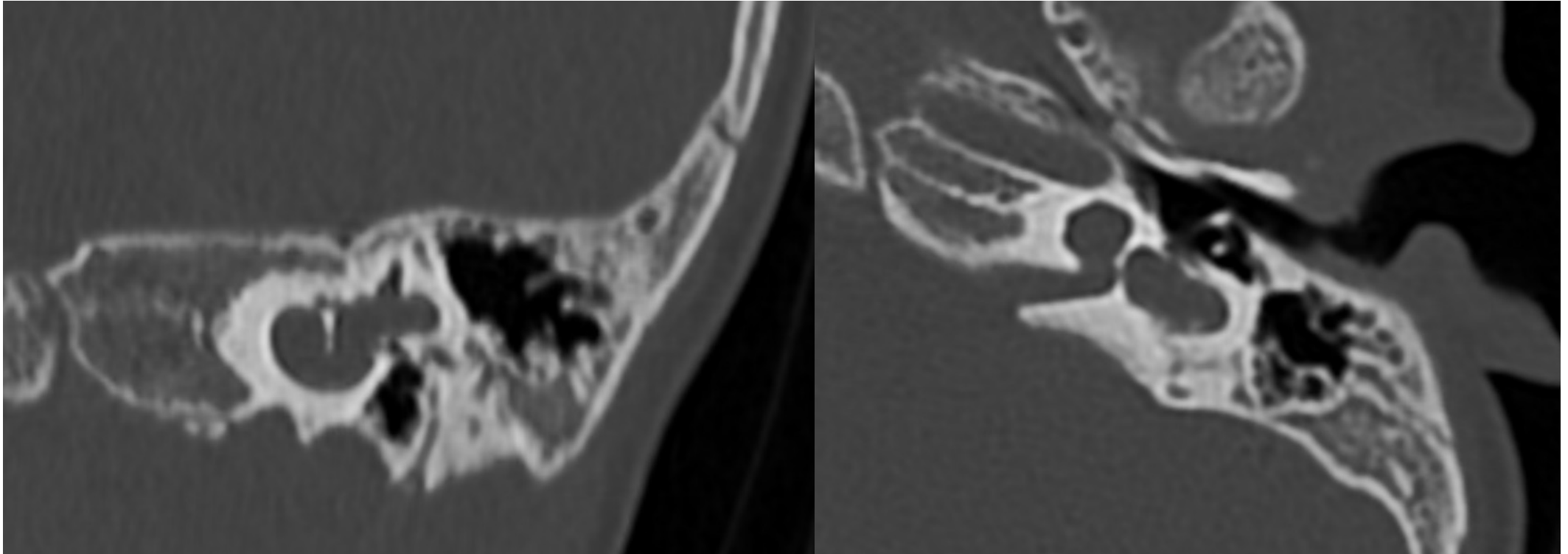
Right side



HRCT TEMPORAL BONE –

1. Abnormal cochlear turns - only 1.0 turns (instead of the normal 2.5 turns)
2. Enlarged vestibule
3. Non-visualization of lateral semicircular canal
4. Widening of the IAC

Left side



HRCT TEMPORAL BONE –

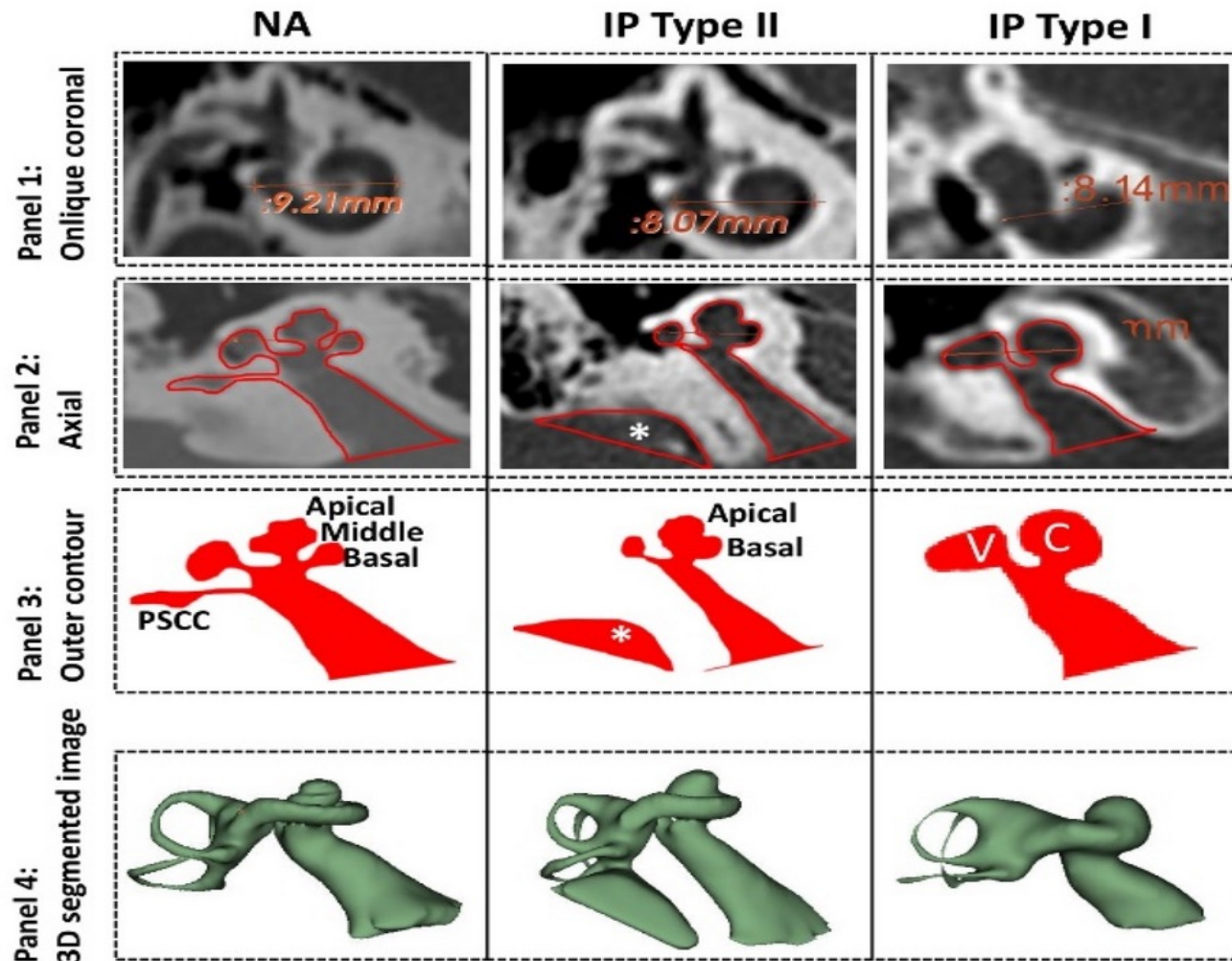
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Differentials

- Cochlear incomplete partition type I

Cochlear incomplete partition type I

POINTS IN FAVOUR	POINTS AGAINST
Cystic appearance of the cochlea	IP-I - cystic cochlea with no modiolus or interscalar septa, (while IP-II (classic Mondini deformity) shows 1.5 turns with preserved basal turn and a cystic apex)
Grossly dilated vestibule	
Clinical features - Sensorineural hearing loss (SNHL)	



*Enlarged vestibular
aqueduct

Dhanasingh, A., Erpenbeck, D., Assadi, M. Z., Doyle, Ú., Roland, P., Hagr, A., Van Rompaey, V., & Van de Heyning, P. (2021). A novel method of identifying inner ear malformation types by pattern recognition in the mid modiolar section. *Scientific Reports*, 11(1).
<https://doi.org/10.1038/s41598-021-00330-6>

THANK YOU.