

## Preoperative High Resolution CT and MR Imaging in Cochlear Implantation

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### Abstract

**Introduction:** Accurate preoperative imaging of the temporal bone in patients receiving cochlear implants is important. High resolution computed tomography (HRCT) and magnetic resonance (MR) imaging are the 2 preoperative imaging modalities that provide critical information on abnormalities of the otic capsule, pneumatization of the mastoid, middle ear abnormalities, cochlear ducts patency and presence of cochlear nerve. **Materials and Methods:** The HRCT and MR imaging in 46 cochlear implant patients in our department were reviewed. **Results:** Majority of our patients [34 patients (73.9%)] showed normal HRCT of the temporal bone; 5 (10.9%) patients had labyrinthitis ossificans, 2 (4.3%) had Mondini's abnormality and 2 (4.3%) had middle ear effusion. One patient each had high jugular bulb, hypoplasia of the internal auditory canal and single cochlear cavity, respectively. **Conclusion:** The above findings contribute significantly to our surgical decisions regarding candidacy for surgery, side selection and surgical technique in cochlear implantation.

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**Key words:** Labyrinthitis ossificans, Michel aplasia, Mondini deformity

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