"COCHLEAR VIEW" AND ITS APPLICATION IN COCHLEAR IMPLANT PATIENTS

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Recent advances in multichannel intracochlear implantation have generated interests in correlating individual stimulating electrodes to pitch perception. An appropriate radiographic technique is required to precisely document the location of the implanted intracochlear electrode array. Anatomical studies, including the measurements of the temporal bone using high-resolution CT films and 3D reconstruction from the petrous bone sections, were conducted to define the spatial position of cochlea in the skull. Thus, a "Cochlear View" was designed and introduced for postoperative radiological evaluation of multichannel intracochlear implantation. In this paper, a detailed radiographic method and radiological interpretation of the "Cochlear View" are described. A plain radiograph of the "Cochlear View" was taken of 120 patients who had received the Nucleus multichannel implant. Studies have shown that a plain radiograph of the "Cochlear View" provides sufficient information to correctly evaluate the results of implantation, including the insertion depth and position of individual electrodes. It plays an important role in guiding the management of frequency mapping and acts as a useful reference for further research purposes.
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