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A new implantable hearing system for moderate-to-severe mixed hearing loss

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The adequate supply of the patients with moderate-to-severe mixed hearing loss (MHL) is not sufficiently possible with conventional hearing aids. These patients have enough cochlear reserve, but the additional middle ear disorder limits the usage of conventional hearing aids (gain limitation and distortion). The second possibility for such patients would be the bone conduction hearing aids, which indicate an insufficient gain for moderate-to-severe MHL. On the other hand because of good cochlear reserve there isn't an indication for cochlear implantation. Therefore there is no an optimal way to give an adequate gain to patients with moderate-to-severe MHL. The new improved DACS-system (Direct Acoustic Cochlea Stimulation) realizes a direct transfer to the inner ear. In this way the conductive disorders of middle ear dose not have any influence on the sound transfer. After an introduction of the functional principle of the system the pre and post operative audiological results of 4 implanted patients will be presented in this lecture. The one year post operative results indicate a functional gain of about 50 dB HL and an SRT improvement of about 40 dB SPL.