of Hearing Aid Benefit (APHAB), the Glasgow children's benefit inventory (GCBI), and the International Outcome Inventory for Hearing Aids (IOI-HA).

Results: All patients who underwent auricle reconstruction expressed satisfaction with their appearance. The mean pure-tone thresholds of unaided patients and those with soft-band and implanted Bonebridge were 55.25±3.43 dBHL, 31.37±3.03 dBHL, and 21.25±2.16 dBHL, respectively. The mean speech discrimination scores measured in a sound field with a presentation level of 65 dB SPL under these three conditions were 46.0±0.11%, 80.0±0.09%, and 94.0±0.02%, respectively. Questionnaires demonstrated patients' benefits and satisfaction with this surgery.

Conclusions: The surgical procedure involving auricle reconstruction and Bonebridge implantation was safe and effective for patients with bilateral microtia-atresia, solving both appearance and hearing problems.

MS 31: The Benefits of Bimodal Hearing

Bimodal hearing in asymmetrical hearing loss: prospective study in patients with same CI and HA devices

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Objectives: The present study aimed to evaluate hearing performance in a homogeneous group of adults with asymmetric hearing wearing the same CI device in the poorer ear and adapted to an identical in the ear with residual hearing.

Material and Methods: 10 bimodal patients implanted with Med-El devices, average age 55.3 years and average SNHL duration was 27.3 years, were involved in a A-B-A study (own-study-own HA) where they were adapted to a 15 channel Widex fusion-440 p (study-HA) . Measures included ff-PTA, sentences recognition quiet, SRT50Italian Matrix Test and pitch discrimination at 200 Hz. Speech perception was measured after one months from each HA best fitting condition.

Results: Bimodal stimulation provides better results than any monaural hearing mode, regardless of whether it involves the use of a hearing aid alone or a cochlear implant alone. ff-PTA was on average better for bimodal hearing with study than own HA both at 125-250 (respectively 25 and 31.4 dB and 500-2000 Hz (respectively 22.3 and 28.3). Median values in CI and bimodal condition with own/study HA were: quiet = 51.6, 98.5 and 88.5 % respectively; SRT50 = 12, 9.6 and 5.7 dB SNR respectively. Pitch discrimination median values in CI and own/study HA were 61, 9 and 14 JND respectively. Results obtained with own-HA were not significantly different between pre-post 15-CH assessment.

Discussion: Bimodal hearing has the potential of providing access to bilateral, binaural cues, such as better pitch perception of F0, to overcome some shortcomings in unilateral CI performance. Outcomes and subjective quality perception are influenced by demographical and audiological factors but also by technical variables such as prescription procedures and number of channels for HA, and coding strategy and channel numbers for CI. These variables should be fully studied in each subject in order to evaluate the effective benefit and support indication to bimodal approach.

Bilateral or bimodal: the influence on primary auditory outcomes in cochlear implanted children

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Due to the current hearing preservation techniques and the success of bilateral cochlear implantation of congenitally deaf children, bimodal children with substantial residual hearing in the non-implanted ear are considered for sequential cochlear implantation. The question is what these bimodal children gain or lose after sequential cochlear implantation. To improve decision making and family counselling regarding bimodal or bilateral stimulation, it is important to measure auditory outcomes in children with substantial residual hearing in the non-implanted ear and compare the results with bilaterally implanted children, both sequentially and simultaneously, and children with normal hearing.

Objective: To compare primary auditory outcomes of sequentially implanted children who had a severe but well aidable hearing loss prior to second implantation with bimodal children with a comparable hearing loss. The primary auditory outcome measures are: perception of interaural level difference (ILD) cues, speech recognition in noise, localization abilities, prosody perception and listening effort. As a reference, the results are compared with the results obtained in simultaneously implanted congenitally deaf children and normal hearing children.

Methods: Perception of ILD-cues is tested with a psychophysical child friendly method in which different sound stimuli are delivered to both devices simultaneously. Speech recognition in noise is tested with a fixed signal to noise ratio in three conditions (S0°N0°, S0°N-90° and S0°N90°). Sound localization abilities are tested in a child friendly setup, by measuring head oriented responses towards perceived sound locations. For prosody perception the just noticeable difference in fundamental frequency of the nonsense-word "baba" is assessed. Listening effort is measured with a word recognition task combined with a semantic categorization task.

Results: Data acquisition will start soon. Preliminary data will be presented.