The change in the NICE guidelines" has led to more cochlear implant (CI) recipients using a hearing aid (HA) in their contralateral ear. Along with a more natural hearing experience, the evidence suggests additional benefits of a bimodal solution being improved speech understanding in quiet and noise. In 2021 Cochlear and GN Hearing began their collaboration to create a system where both the CI and HA work together to optimise both connectivity and wireless streaming. Many Auditory Implant Centres do not routinely manage the HA in the contralateral ear, resulting in the patient attending two different centres for their Audiological care.

Method

Recipients of the Cochlear Nucleus® 7 sound processor with usable contralateral hearing were offered the opportunity to exchange their current HA for a danalogic Ambio Smart HA. After training audiologists followed the bimodal fitting flow for Cochlear sound processors and danalogic Ambio Smart HAs. Devices were linked and then Bluetooth paired to the patient’s mobile device for streaming.

Over a 10 day period patients completed a short survey on their phone using the ‘RealLife Exp’ app. Each day they responded to the same 8 questions providing us with an ecological momentary assessment of their experiences each day.

Audiologists recorded their clinical experiences after each fitting and consolidated their findings at the end of the trial.

Results

- 10 participants were fitted bimodally by the Cochlear Implant Team.
- 89% would recommend their new bimodal system to friends and family.
- All study participants reported the sound quality of their streaming to be good, very good or excellent.
- 3/4 of participants were very much satisfied with their bimodal system.
- 70% reported better or much better quality of listening experience.
- The change in the NICE guidelines released in 2018 was a significant step towards a greater acceptance and availability of bimodal solutions.
- A majority of participants reported improved speech understanding and more balanced listening experience.
- 100% of participants reported that their streaming was easy to use.
- Much positive effect on my QoL (Quality of Life) was reported for all the questions.

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Clinicians’ experiences:

- "Once we had received training, fitting the hearing aids and pairing them to the CI was very straightforward."
- "The software was nice to use and gives you the option of either keeping things simple or exploring the more advanced features. Linking the HA with the CI and then pairing with the patients phone was seamless."
- "The bimodal fitting flows created by Cochlear and GN hearing ensure you can follow a step-by-step fitting guide that gives you confidence to ensure the best outcomes."

Conclusion

10 participants were fitted bimodally by the Cochlear Implant Team.

With training and use of the bimodal fitting flow, staff felt confident in carrying out the fittings in the clinic.
- 47% said the same amount of effort to listen with their new bimodal system whilst ½ found it more effortful and the remaining ¼ less effortful.
- 2/3 of participants reported their bimodal system to have a very positive impact on their QoL.
- 70% reported better or much better quality of listening experience.
- 3/4 of participants were very much satisfied with their bimodal system.
- 96% of participants streamed daily.
- The majority of patients streamed phone calls, television, movies and music.
- All study participants reported the sound quality of their streaming to be very good, good or excellent.

Recommendations

CI departments should consider fitting patients bimodally to provide the optimal hearing experience for their patients.

If the hearing aids could be included in a bundle with the CI it would be much easier for Departments to order.

Participant follow ups were done via text message/email. Offering a face to face review may improve patient outcomes further.

References

1. Cochlear implants for children and adults with severe to profound deafness. Technical Advisory Guidance (TAG566) Published 7th March 2019
3. Smart Bimodal hearing solution (cochlear.com)