Changing Trends in Referrals for Consideration of Cochlear Implantation

Introduction

Over the past ten years 746 deaf children and adults have been referred to the South of England Cochlear Implant Centre (SOECIC) for an assessment for cochlear implantation. In the year 2001 SOECIC received 50 referrals for assessment and by 2010 this had risen to 125 per annum.

Assessment outcomes

439 of the patients referred during this decade have now received a cochlear implant. On average SOECIC has implanted around two-thirds of the patients referred for an assessment. Reasons for discharge include patients that are not suitable candidates and SOECIC is looking at ways to reduce the number of inappropriate referrals by offering training to local services to ensure that patients/parents have a clearer understanding of what a cochlear implant can offer prior to referral. For others the reasons for discharge are complex and it is not until a full assessment has taken place that a decision not to proceed to implant can be made. Fig 5 shows the current status of patients that were referred to SOECIC for an assessment, several have now had a second cochlear implant and have the potential for binaural hearing. Twenty patients implanted at SOECIC have transferred on to other programmes as they have moved areas.

Age

Following the onset of neonatal screening for hearing in the UK there has been a trend to refer younger children. Fig 4 shows the age of the youngest deaf child at referral and the age of the youngest congenitally deaf child to be implanted that year. At SOECIC the policy is to implant congenitally deaf children around their first birthday and by 2010 the most common age of implant was between 12 and 18 months (Fig 5) compared to 2001 when most of the children implanted were 2-3 years (post meningitis children were not included). Throughout the decade SOECIC was receiving referrals for older adults (Fig 6) but they were often discharged before any assessment took place - in some cases the NHS commissioners had refused funding for assessment and in other cases the patient decided not to commence assessment. There has been a trend for SOECIC to implant older adults and 2009 saw the first nonagenerian to receive an implant. Figs 5 and 7 show how the age profile of the implanted patients has changed over the decade.

Criteria

During the decade the criteria for cochlear implantation have undergone several changes. In 2001 SOECIC was implanting adults who scored <50% on BKB Sentences and had a severe hearing loss. In 2008 criteria changed to <60% on BKB with a profound hearing loss in the high frequencies. In 2009 following production of the NICE TAG 166 the cut off reverted to a score of <50%. Some adults are therefore no longer eligible. Children assessed in 2001 needed to have aided thresholds in the high frequencies of >50dB (HL), now the criteria is based on unaided thresholds of 90dB (HL) at 2 and 4kHz. Therefore some children who would not have been in criteria for an implant in 2001 have returned to SOECIC for a re-assessment and have now been implanted.

Aetiology

During the decade SOECIC has been implanting more patients with additional difficulties. The aetiology of the patients implanted from this cohort is shown in Fig 8. For most of the patients the cause of deafness remains unknown. In the past two years there has been an increase in the number of patients (including some children) that have had meningitis. Since 2001 26 children that were either premature or had cytomegalovirus (CMV) now have cochlear implants. Children with an aetiology of meningitis, prematurity or cytomegalovirus may also have special needs, some of which may become obvious as the child matures. There have been 34 patients with an identified syndrome implanted including 5 with Ushers Syndrome. Since 2004 there have been 10 children implanted with Auditory Neuropathy Spectrum Disorder and the normal audiological criteria has not been relevant so funding has been secured on an exceptional basis.

Conclusion

SOECIC is continuing to receive more referrals year on year. This partly due to the increased acceptance of cochlear implantation as a treatment for severely and profoundly deaf children and adults. The issue of the NICE TAG has increased awareness among ENT and audiology professionals and ensured that patients across England and Wales have equal access to this treatment. Patient groups such as NCIUA and CICs have been instrumental in promoting the potential benefits of cochlear implants. At the beginning of 2001 there were just 144 adults and 43 children with cochlear implants under the care of SOECIC. At the end of 2010 there were 340 adults and 243 children (over 120 patients using two implants). Whilst dealing with the increased rate of referral, SOECIC also needs to service the needs of the patients that have been implanted. SOECIC is therefore looking at ways to manage this growing caseload whilst ensuring that patients continue to derive optimal use of their technology.

References


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