New advances of cochlear implantation

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The overall prognosis for hearing improvement and improved quality of life in the properly selected patient is excellent. Early identification of significant hearing loss followed by intervention procedures significantly increases the level of language development, speech intelligibility and emotional stability as compared with children with later identification and intervention. The effect of cochlear implants on the health and development including medical outcomes, speech perception and discrimination, verbal language skills, literacy, vocational opportunities, income and quality of life is amazing. A cochlear implant consists of microphones, external speech processors, signal-transfer hardware, transmitters, receivers, and electrodes. There are three separate corporations manufacture multichannel implant systems that are commercially available and approved by the FDA for use in both adults and children: the Nucleus Contour system, the Clarion system and the Med-El system. Accurately assessing candidacy from an audiologic, medical, and emotional standpoint is necessary. There are three surgical approaches in cochlear implantation: trans-mastoid approach, trans-canal approach to round window niche (Veria operation) and middle cranial fossa approach. Although unilateral cochlear implantation has been more common than bilateral cochlear implantation, the advantages of binaural hearing such as improved speech recognition in noise and improved localization abilities are available to adults using two cochlear implants. Cochlear ossification results from inflammation of the inner ear, often following deafness secondary to meningitis. Most instances of ossification do not preclude cochlear implantation because total ossification is rare. In one series, bony growth was confined to the basal-most portion of the cochlea and was easily traversed with minimal drilling. The split-array technique was performed with the Nucleus split array device, with satisfactory results. Children with inner ear malformations can safely receive implants; however, special attention should be paid to the occurrence of intra-operative facial nerve anomalies and CSF leaks through the cochleostomy. Because cochlear implantation has become widespread now, complication rates may be higher at new centers than those at an experienced center. Unless intensive postoperative rehabilitation is undertaken, cochlear implantation is likely to provide little benefit. Each patient’s need for rehabilitation is different based on pre-operative auditory experience. Implantation is cost-effective and results in high patient satisfaction. The overall prognosis for hearing improvement and improved quality of life in the properly selected patient is excellent. Early identification of significant hearing loss followed by intervention procedures significantly increases the level of language development, speech intelligibility and

emotional stability as compared with children with later identification and intervention. The effect of cochlear implants on the health and development including medical outcomes, speech perception and discrimination, verbal language skills, literacy, vocational opportunities, income and quality of life is amazing. A -cochlear implant consists of microphones, external speech processors, signal transfer hardware, transmitters, receivers, and electrodes. There are three separate corporations manufacture multichannel implant systems that are commercially available and approved by the FDA for use in both adults and children: the Nucleus Contour system, the Clarion system and the Med-El system. Accurately assessing candidacy from an audiologic, medical, and emotional standpoint is necessary. There are three surgical approaches in cochlear implantation: trans-mastoid approach, trans-canal approach to round window niche (Veria operation) and middle cranial fossa approach. Although unilateral cochlear implantation has been more common than bilateral cochlear implantation, the advantages of binaural hearing such as improved speech recognition in noise and improved localization abilities are available to adults using two cochlear implants. Cochlear ossification results from inflammation of the inner ear, often following deafness secondary to meningitis. Most instances of ossification do not preclude cochlear implantation because total ossification is rare. In one series, bony growth was confined to the basal-most portion of the cochlea and was easily traversed with minimal drilling. The split-array technique was performed with the Nucleus split array device, with satisfactory results. Children with inner ear malformations can safely receive implants; however, special attention should be paid to the occurrence of intra-operative facial nerve anomalies and CSF leaks through the cochleostomy. Because cochlear implantation has become widespread now, complication rates may be higher at new centers than those at an experienced center. Unless intensive postoperative rehabilitation is undertaken, cochlear implantation is likely to provide little benefit. Each patient’s need for rehabilitation is different based on pre-operative auditory experience. Implantation is cost-effective and results in high patient satisfaction