HEARING LOSS -PREVENTION

DR JP,ASST PROF,ICH,GOVT MEDICAL COLLEGE KOTTAYAM

- Childhood hearing loss can be a debilitating condition that affects 1 to 6 per 1,000 newborns to a significant degree. Such high prevalence warrants close attention because it is widely acknowledged that the first 36 months after birth represent a critical period in cognitive and linguistic development. (1) Although early identification of children who are deaf and hearing-impaired allows such children to approach their hearing peers in language skills and academic performance, those who are identified late often never can reach the same level of skill.
- Targeted hearing screening used to be recommended as a method for early detection of hearing loss in neonates andinfants. However, past studies documented that only 50% of children who had hearing loss were identified effectively by targeted screening and that the average age of hearing loss detection with this method was as late as 14 months. To initiate treatment as rapidly as possible and avoid preventable disability, every state has now mandated universal newborn hearing screening (UNHS) programs, a crucial part of early hearing detection and intervention (EHDI).
- The American Academy of Pediatrics (AAP) recommends that congenital hearing loss be detected by 1 month, diagnosed definitively by 3 months, and receive intervention by 6 months of age for all infants born in the United States.
- Because hearing loss can be acquired at any age, it is critical for primary care practitioners to assess risk factors for hearing loss at each visit and determine which, if present, warrant a referral for full audiologic evaluation. In addition, all children ages 4 years and older who are developmentally able to cooperate with conventional audiometry should be screened regularly for hearing loss.
- Early intervention in all cases of hearing loss can reduce disability significantly and improve both linguistic skills and cognitive development in the hearing-impaired population

Conductive Hearing Loss	
Conductive Hearing Loss Congenital • Microtia/atresia • Tympanic membrane abnormalities • Ossicular malformations	early stimulation
Acquired • Infection (acute otitis media, otitis externa, ossicular erosion) • Otitis media with effusion • Foreign body (including cerumen) • Cholesteatoma • Trauma (ossicular disruption, tympanic membrane perforation)	Treat aom/ome aggressively and follow up for hearing loss

Sensorineural Hearing Loss • Genetic disorders (syndromic, connexin 26, mitochondrial) • In utero infections (cytomegalovirus, measles, mumps, rubella, varicella, syphilis) • Anatomic abnormalities of the cochlea or temporal bone • Exposure to ototoxic drugs during pregnancy (alcohol, isotretinoin, cisplatinum) • Hyperbilirubinemia	Genetic testing in suspected cases Torch screening Mmr vaccine Aggressive treatment of jaundice
• Infections (bacterial meningitis, measles, mumps, rubella, Lyme disease) • Trauma (physical or acoustic) • Radiation therapy for head and neck tumors • Neurodegenerative or demyelinating disorders (Alport, Cogan syndromes)	Hib,prevnar,bcg,measles,mmr Watch for hearing in developmental delay and regression

Risk factors- prevention

Before 28 Days of Age

• Family history
• In utero infections
• Ear and other craniofacial anomalies
• Anomalies associated with syndromic sensorineural hearing loss
• Hyperbilirubinemia requiring exchange transfusion
• Birthweight <1,500 g
• Apgar score <3 at 5 minutes or <6 at 10 minutes
• Mechanical ventilation, especially for more than 10 days
• Exposure to ototoxic medications (eg, gentamicin)

After 28 Days of Age

• Parental concern about hearing, speech, or developmental delay
• Persistent otitis media with effusion for more than 3 months
• History of head trauma
• History of bacterial meningitis
• Diagnosis of disorders that can lead to hearing loss (eg, neurodegenerative disorders, demyelinating disorders)
• Diagnosis of syndromes associated with hearing loss (eg, Alport syndrome)