Multidisciplinary intervention for a child with hearing loss and vestibular concerns

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Introduction: Children with congenital hearing loss have speech and language impairments. Profound hearing loss leads to vestibular dysfunction, which results in balance and co-ordination deficits. Thus, the child has difficulties in acquiring gross motor skills, which in turn limit her interaction with the outside world and acquisition of academic and life skills. We have documented the comprehensive evaluation of a child with hearing loss and vestibular concerns, under various disciplines within the same clinical setting and the successive interventions that the child received.

Case Report: A 12 year old girl with speech and hearing concerns was evaluated at a multidisciplinary child development center. MRI-cochlea and auditory evaluation indicated Mondini dysplasia with moderate to profound hearing loss in the left and right ear respectively. Developmental evaluations revealed balance and co-ordination deficits; gross and fine motor delay and sensory concerns. Academic evaluation indicated difficulties in reading, spelling, writing and comprehension. Psychological evaluation indicated moderate sub-normality in social and intellectual functioning, associated with behavioral concerns.

Intervention: Multidisciplinary intervention was implemented over 18 months. Hearing aids enabled the child to express her needs using single words and improve receptive and expressive vocabulary. Physiotherapy and occupational therapy improved depth perception, balance and attention span. Pre-academic skills improved significantly (e.g., shape, color and number recognition; phonemic awareness). Parental counseling and behavior modification techniques reduced tantrums and stubborn behavior.

Conclusion: Multidisciplinary intervention is incumbent for optimally reducing vestibular concerns associated with hearing loss. Functional improvement across multiple developmental domains is essential to improve quality of life.

Biography
Kern Rebello has completed Bachelors in Physiotherapy from Father Muller Medical College at Mangalore, India and Post-graduation in Health and Rehabilitation Sciences from University of Pittsburgh, USA.

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