Challenges in Early Diagnosis of Enlarged Vestibular Aqueduct (EVA) in Pediatric Population: A Single Case Report

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Abstract : Enlarged vestibular aqueduct (EVA) refers to the presence of congenital sensorineural hearing loss with an enlarged vestibular aqueduct. The Audiological symptoms of EVA are fluctuating and progressive in nature and the diagnosis of EVAS can be confirmed only with radiological evaluation. Hence it is difficult to differentiate EVA from conditions like Meniere's disease, semi-circular dehiscence, etc based on audiological findings alone. EVA in adults is easy to identify due to distinct vestibular symptoms. In children, EVA can remain either unidentified or misdiagnosed until the vestibular symptoms are evident. Motor developmental delay, especially the ones involving a change of body alignment, has been reported in the pediatric population with EVA. So, it should be made mandatory to recommend radiological evaluation in young children with fluctuating hearing loss reporting with motor developmental delay. This single case study of a baby with Enlarged Vestibular Aqueduct (EVA) primarily aimed to address the following: a) Challenges while diagnosing young patients with EVA and fluctuating hearing loss, b) Importance of radiological evaluation in audiological diagnosis in the pediatric population, c) Need for regular monitoring of hearing, hearing aid performance, and cochlear implant mapping closely for potential fluctuations in such populations, d) Importance of reviewing developmental, language milestones in very young children with fluctuating hearing loss.

Keywords: enlarged vestibular aqueduct (EVA), motor delay, radiological evaluation, fluctuating hearing loss, cochlear implant.

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