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Unilateral vocal cord paralysis in Arnold Chiari malformation

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Background: Arnold Chiari Malformation (ACM) is a group of congenital abnormality involving the cerebellum and spinal cord and type 1 Chiari malformation has its primary feature as the herniation of the cerebellar tonsils through the foramen magnum into the cervical spinal canal. Chiari malformation is reported to be a rare cause of bilateral vocal cord palsy in the adult population. Chawla, Wee and Arora (2008) reported a single case of bilateral vocal cord paralysis as a result of Chiari malformation in adults. There have been no reports that suggest the presence of unilateral vocal cord palsy in ACM.

Aim: This study reports the occurrence of unilateral vocal cord palsy due to ACM and highlights voice characteristics that are considered critical in the assessment of individuals diagnosed with ACM.

Methodology: The participant of the study was a 31 year old male with a diagnosis of Type 1 Arnold Chiari malformation. He reported with concern of sudden change in voice. Detailed voice evaluation consisted of both perceptual and objective assessment. Perceptual voice evaluation was carried out using GRBAS scale, objective evaluation was carried out using Multi Dimensional Voice Program (CSL model 4500, Kay Elemetrics) and Stroboscopy.

Results: The perceptual and acoustic evaluation results are discussed and showed good correlation. Stroboscopy findings revealed right vocal cord paresis.

Conclusion: ACM needs to be considered as a possible cause of sudden onset vocal cord palsy and reported cases of Arnold Chiari malformation should be assessed for vocal cord palsy and related consequences.

Biography

Reeta Jaya Philip is a PhD scholar in Speech Language Pathology at Dr. S R Chandrasekhar Institute of Speech and Hearing, Bangalore University, India. Her area of research interest includes traumatic brain injury and related disorders and adult neurogenic language disorders.

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