

Can Addressing Sensory Issues Improve Gross Motor Function in a Rare Case of Neurogenic Arthrogryposis Multiplex Congenita? A Case Report

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ABSTRACT

Introduction: Arthrogryposis multiplex congenita [AMC] is a rare, congenital disorder characterised by multiple joint contractures.

Case Description: One year old male child presented with AMC [bilateral feet pes calcaneovalgus, bilateral knee extension contracture, bilateral hip teratologic dislocation, left middle and ring finger camptodactyly]. For the same, open reduction of left and right hip were done at 8th and 9th month of life respectively followed by contracture release. Also, MRI reveals presence of short segment syrinx from D10 to D12 levels leading to neurogenic bladder, investigated by Urowater cystometry. At 1.4 year age, he reported for physiotherapy and examination were done for motor and musculoskeletal system. As history reported by parents, presence of sensory issues was suspected and sensory profile 2 was performed which revealed that he is sensory avoider, avoids touch sensation more than others and performs movement much less than others. Denver II developmental screening test revealed his gross motor, fine motor age was 6 months while language, social age was 7 months. His treatment includes sensory integration therapy, neurodevelopmental techniques and age appropriate goal directed activities.

Results: After receiving treatment for almost one year, re-examination were done at the age of 2.4 years, where he has shown improvement in avoider quadrant from raw score: 31/55 to raw score:23/55, in touch section from raw score: 15/30 to raw score:8/30 and in movement section from raw score: 07/25 to raw score:15/25. Denver II developmental screening test were performed which showed that his gross and fine motor age has been improved from 6 months to 17 months while language and social milestone development became age appropriate.

Conclusion: We conclude that addressing sensory issues at priority level, will help to improve the responsiveness of patient at great level and better positive results can be obtained in shorter period in rare case of neurogenic AMC.

Keywords: Neurogenic arthrogryposis multiplex congenital, Denver II

