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Guest Editorial

Do not neglect the hips in cerebral palsy!

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Cerebral palsy is a disease characterized by spasticity, motor weakness and imbalance between different muscle groups giving rise to contractures, joint instability, subluxation and dislocation.[1] The more severely affected pool of patients is more prone to these sequelae.[2] It has been appreciated over the years that hip subluxation or dislocation is prevalent in both the ambulant and non-ambulant groups, but the latter group is most prone to this. Studies by Soo *et al*.,[3] placed the hip dislocation incidence as high as 90% in the Gross Motor Function Classification System (GMFCS)[4] Level 5 non-ambulant patients.

Decentering of the hip, when combined with abnormal muscle forces and spasticity, damages the femoral head and pain follows as a consequence of this.[5] The vicious link between pain and increased spasticity is activated with disastrous consequences, poor quality of life, and difficult caregiving. Must a clinician wait for this stage to be reached before action is taken? Obviously, the answer is "NO." If so, how would a clinician know that the hip is decentering? Clinical examination can help but can be misleading and active surveillance is required. This is based on X-rays and the concept of migration of the femoral head.[6]

Based on this premise, surveillance for the hip in cerebral palsy was started as a program nearly 30 years back in southern Sweden,[7] followed by Australia[8] and many other countries. We in India have come up with our own hip surveillance guidelines based on a survey of orthopedic surgeons in India.[9] A Delphi process was followed by a team of multidisciplinary experts who considered different aspects of hip problems in cerebral palsy and their correlation with the GMFCS, what would be best in the Indian scenario in terms of the frequency of visits to medical personnel, and also the frequency of X-rays to be taken for individual GMFCS levels at different ages. Based on this, the Indian hip surveillance document was created. However, establishing a surveillance program in a big country is indeed a massive effort much outside the purview of clinicians.

From the surveillance standpoint, education and training of the different professionals involved in managing cerebral palsy becomes paramount. The basics of hip surveillance need to be passed on to them. They should be able to do a rapid clinical screening and read X-rays. Hip surveillance should start early and the frequency of examination should be as outlined in the surveillance program.[10]

Clinicians have to be made aware of the benefits of a hip surveillance program, including early detection of hip instability and that high-risk patients can be flagged for close surveillance.[11] The altered pathomechanics can be rectified by simpler procedures and complex surgeries can be

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avoided.[12] Hip damage and destruction can be minimized and long-term function can be preserved. This has been borne out by the results of various surveillance programs.[13,14] All cerebral palsy patients who come under appropriate professional care can benefit from hip surveillance. Surveillance programs are cost-effective, especially compared to the morbidity and treatment required for dislocated or irretrievably damaged hips.[15]

Implementing a surveillance program in countries with well-developed public health systems and controlled populations is easy. Definitely, such programs must be adapted and applied locally to avoid morbidity and provide a better quality of life for patients with cerebral palsy.[16]

USE OF ARTIFICIAL INTELLIGENCE (AI)-ASSISTED TECHNOLOGY FOR MANUSCRIPT PREPARATION

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