

00110 Risk Factors of Hip Dysplasia in Children With Long Term Neurological Conditions

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Aims: Children with long term neurological conditions (LTNC) are at a higher risk of hip dysplasia. This study examines the factors that increase the risk of hip subluxation and dislocations in the local population of LTNC.

Methodology: Patients from complex motor disorder clinics, neuro - rehabilitation clinics and botulinum toxin assessment and treatment clinics between January and March 2018 were analysed retrospectively - in the Functional Musculoskeletal Deformities clinical audit (Median age 7years, Standard Deviation 4years 9months).

Using the Gross Motor Function Classification System (GMFCS) levels to determine the severity of motor impairment of children with LTNC (N=146), we compared the children with a lower GMFCS level (I - III) with those with higher GMFCS scoring (IV - V), their motor phenotype and the use of anti - epileptics with their rates of hip dysplasia.

Result: Children with a higher GMFCS levels (IV - V) had significantly more hip dysplasia ($p=0.001$) than those with a lower GMFCS level (I - III). Children who were on anti - epileptics were also at a higher risk of hip dysplasia than those without. ($p=0.006$). While examining their motor phenotype, 17.4% of children with spasticity only, 26.9% of those with dystonia only and 24.2% of those with mixed spasticity and dystonia had hip dysplasia.

Conclusion: In line with studies done in other countries, Singaporean children with LTNC are prone to hip subluxation and dislocations. Out of these children with LTNC, those with higher GMFCS levels and who were on antiepileptic drugs were at a higher risk. Children with dystonia only and mixed spasticity - dystonia phenotypes were at a higher risk of hip dysplasia than those with spasticity alone. Hip surveillance models are essential to be implemented so as to ensure that hip subluxations and dislocations do not go undetected, especially in children with these risk factors.