The multidisciplinary ENCORE Expertise Center for Angelman Syndrome: a broad overview of health issues and development of 100 children.


We present a cohort of the first 100 children with Angelman Syndrome (AS) seen in the AS clinic of the ENCORE Expertise Center for Neurodevelopmental Disorders in Rotterdam, representing approximately 75% of all children with AS in the Netherlands. We studied their health issues and development to further delineate the phenotype and analyzed associations between phenotype and genotype and other determinants, with the aim to identify opportunities to improve care, better inform parents and establish natural history data for future intervention studies.

The children were seen by a pediatric neurologist, pediatrician, clinical geneticist, physical therapist, speech and language therapist, psychologist and child- and adolescent psychiatrist at set ages. A standardized medical history was taken including a questionnaire on epilepsy, sleep, development, nutrition and physical complaints, and a physical exam including growth parameters was performed every visit. Development was evaluated with the BSID-II or Bayley-III.

We confirmed the overall clinical presentation and a more severe phenotype in the deletion children. Furthermore, we saw a negative association of (early onset of) epilepsy with mobility and motor, cognitive and receptive language development. Prevalence of crouch gait was high in the older children and not reported earlier. Microcephaly was seen in a lower prevalence than reported earlier. Weight for height was above average in all genotypes with a significant difference between deletion and non-deletion children and between children with UPD/IC and UBE3A-mutation. Hyperphagia was present in a third of all children.

To our knowledge, this is the largest clinical AS cohort in Europe with prospectively and multidisciplinary collected data on both health issues and development. Most of these issues were recently stated as important for parents of children with AS. Our center has unique opportunities for clinical intervention studies to optimize quality of life and outcome of children with AS and their families.