NEWS

Clinical research: Study questions symptoms of Angelman syndrome

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Giovanni Francesco Caroto Not so happy: Fewer children with Angelman syndrome than expected have the characteristic laughing disposition, researchers have found.
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One of the first large-scale, ongoing studies documenting **the symptoms of Angelman syndrome** — a neurological disorder with features similar to autism — is calling into question some of the so-called characteristic symptoms of the syndrome.

Initial results published in the January *American Journal of Medical Genetics* say that more than one-third of children with the syndrome do not have two core symptoms of the disorder — a history of seizures and a happy disposition.

Angelman syndrome is caused by inactivation of **UBE3A**, which targets proteins for destruction. UBE3A is also thought to regulate connections between neurons in the brain by **pruning unnecessary ones**.

About 70 percent of cases of Angelman syndrome are triggered by a lack of the mother's copy of the UBE3A gene. Subtle mutations in the mother's copy of UBE3A, or inheriting both copies of the gene from the father can also cause the syndrome.

The researchers found that of 92 children in their initial study, 80 percent have a smaller head size than normal, 88 percent of children who can walk are uncoordinated, 95 percent tend to put objects in their mouths more than expected, 80 percent have problems with their sleep and 75 percent are fascinated with water.

Contrary to expectations, however, only 65 percent of the children have a history of seizures, and only 65 percent have the tendency to break into what is considered to be inappropriate laughter. These observations should serve as a caution to clinicians who may rule out a diagnosis of Angelman syndrome when children do not have these symptoms, the researchers say.

The researchers see differences in some of these symptoms based on how the disorder is inherited. About 83 percent of children with the deletion have a smaller head size and seizure history compared with 55 percent of children who only have maternal mutations, and 46 percent of children who inherit copies of the gene from their fathers.