
The goal of this study was to determine how common mood disorders are in people with distal 18q-. There are two types of mood disorders: depression and bipolar disorder. This study looked at 36 people with distal deletions of 18q that are at least 4 years old. Of these 36 people, 16 had been diagnosed with a mood disorder during their lifetime. Fourteen had depression and two had bipolar disorders. Interestingly, the group that had been diagnosed with a mood disorder often had other psychiatric conditions. 75% had an anxiety disorder, including generalized anxiety disorders, social and other phobias, separation anxiety, post traumatic stress disorder, obsessive-compulsive disorders, and panic disorders. We also compared this group to people of a similar age and with a similar deletion, but no diagnosis of mood disorders. It seems that the group that had a mood disorder had, in general, higher IQ scores and lower risk of autism. This may be because people with mood disorders actually have higher cognitive abilities. Alternatively, it may be that those with more intellectual impairment are not able to express or realize they have depression or bipolar disorder. We also learned that a deletion on the chromosome inherited from the mother seems to confer a high risk for a mood disorder.

We also narrowed down the region of the chromosome that seems to be associated with mood disorders. This is called the critical region. There are two genes in this region (ZADH2 and TSHZ1) as well as one additional sequence of DNA that appears to be a gene. Several of the people with no diagnosis of a mood disorder had deletions of these genes, which tells us that not everyone missing these genes has depression or bipolar disorder.

The genetics of psychiatric conditions, such as depression and bipolar disorders, are very complex. There is much work that remains to be done to understand how psychiatric conditions impact families with chromosome 18 conditions.