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Robust Storage Assignment in Unit-Load Warehouses.

Myotonic dystrophy type 1 (DM1) is the most frequent inherited neuromuscular disorder. The juvenile form has been associated with cognitive and psychiatric dysfunction, but the phenotype remains unclear. We reviewed the literature to examine the psychiatric phenotype of juvenile DM1 and performed an admixture analysis of the IQ distribution of our own patients, as we hypothesised a bimodal distribution. Two-thirds of the patients had at least one DSM-IV diagnosis, mainly attention deficit/ hyperactivity disorder and anxiety disorder. Two-thirds had learning disabilities comorbid with mental retardation on one hand, but also attention deficit, low cognitive speed and visual spatial impairment on the other. IQ showed a bi-modal distribution and was associated with parental transmission. The psychiatric phenotype in juvenile DM1 is complex. We distinguished two different phenotypic subtypes: one group characterised by mental retardation, severe developmental delay and maternal transmission; and another group characterised by borderline full scale IQ, subnormal development and paternal transmission.