Evolution of foot and ankle manifestations in children with CMT1A

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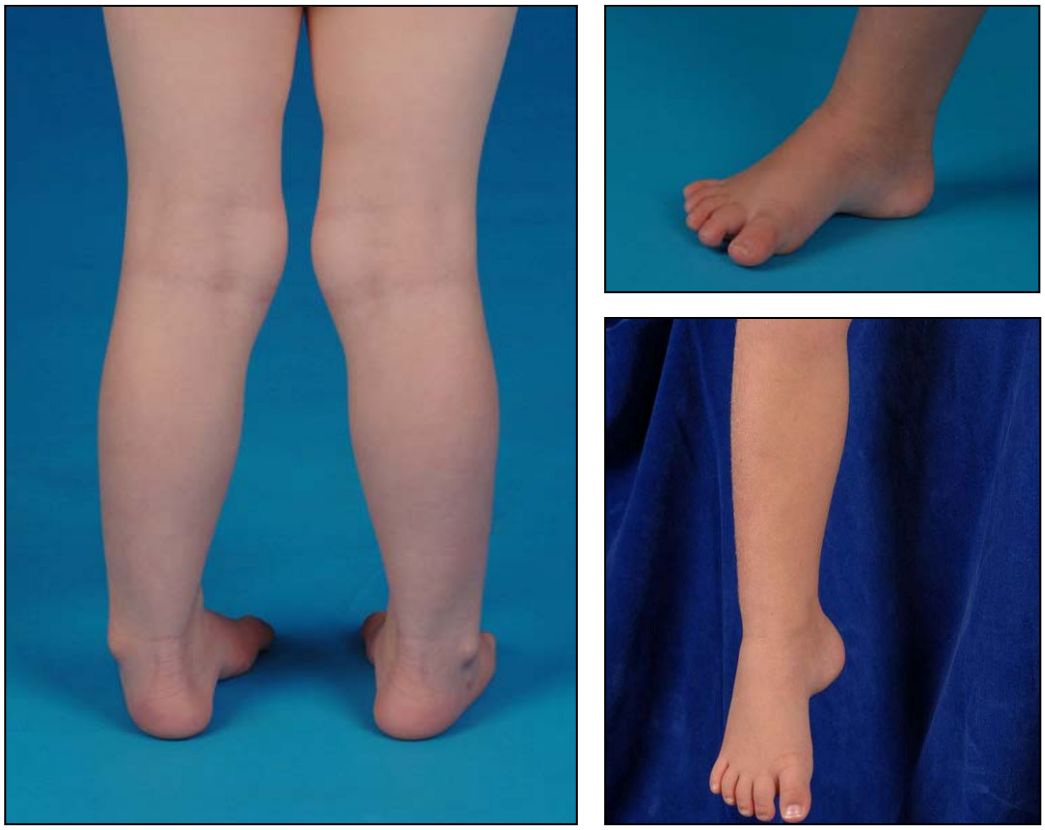
We studied the timing and progression of foot and ankle changes in 81 children with genetically confirmed Charcot-Marie-Tooth disease type 1A (CMT1A) and determined their impact on motor function and walking ability. Foot deformity, weakness, pain, cramps, and instability were a common feature of CMT1A. Foot structure evolved toward pes cavus from early childhood to adolescence, although a subgroup with normal and planus feet remained. Foot strength increased with age, although compared to age-equivalent norms it declined from 4 years. Factors associated with evolving foot deformity included muscle weakness/imbalance, restricted ankle flexibility, and joint hypermobility. Regression modeling identified dorsiflexion weakness, global foot weakness, and difficulty toe-walking as independent predictors of motor dysfunction, while pes cavus and difficulty heel-walking were predictors of poor walking ability. Foot problems are present from the earliest stages of the disease and can have a negative impact on function. Early foot and ankle intervention may prevent long-term disability and morbidity in CMT1A.

Figure Early pes cavus in a five year old child with CMT1A.



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