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Progressive digital gigantism due to macrodystrophia lipomatosa: Surgical management and functional restoration in a pediatric patient

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Macrodystrophia lipomatosa is a rare, non-hereditary congenital malformation characterized by disproportionate tissue growth, with fibro-fat proliferation. The volumetric increase compromises bone, nerve, vascular, and soft tissue structures, with static or progressive evolution. The diagnosis is clinical-radiological and requires exclusion of syndromic conditions. When it affects the toes, there is difficulty with footwear, gait changes, and psychosocial repercussions. Surgical treatment is challenging because it requires a balance between adequate resection of excess tissue and the preservation of structure. The objective of this study is to report the surgical management and clinical outcome in pediatric patients with progressive digital gigantism. The case report is based on a review of the patient's electronic medical record, obtained with free and informed consent, and the patient is followed at a tertiary service. A 7-year-old male patient with congenital, non-syndromic, and progressive macrodystrophia lipomatosa in the 2nd and 3rd toes (PDD). The patient reported poor shoe fit and aesthetic dissatisfaction. Preoperative assessment included analysis of forefoot alignment, digital proportion, and neurovascular integrity. In reconstructive surgery, a V incision was made over the 3rd ray, followed by amputation of the ray with a preserved base. Reductional syndactyly was performed to adjust the interdigital space and improve the forefoot contour. Amputation of the middle and distal phalanges of the 2nd toe was also performed to harmonize the digital length. At three months of follow-up, the patient walked normally, with adequate adaptation to footwear and satisfaction with the aesthetic result. Individualized surgical management of digital gigantism can restore function and significantly improve aesthetics. The strategic preservation of anatomical structures and careful preoperative planning are fundamental for better results.

Keywords: Gigantism; Lipomatosis; Foot deformities, congenital.

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