MR Imaging of Primary Skeletal Muscle Diseases in Children

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摘要

Abstract

Magnetic resonance imaging of the lower extremities was performed with a low field system in 51 patients representing three different categories of biopsy-proven primary skeletal muscle disease: muscular dystrophies, congenital myopathies and polymyositis. The intermuscular distribution of abnormal signal intensity and the grade of involvement of individual muscles were assessed. Large differences in the degree of pathological signal intensity between individual muscles were found in all categories. In the muscular dystrophy and polymyositis patients, the overall involvement was significantly more severe than in patients with congenital myopathy. Definite patterns of selective involvement were seen. Statistical evidence of selective muscle sparing was found; the gracilis muscle was significantly less affected than the other muscles in all three disease groups. Other muscles with significant sparing include the rectus femoris and sartorius muscles of the thigh and the tibialis posterior muscle of the leg. Common anatomical and functional characteristics of muscles may be related to the distribution of muscular disease.