

Quantitative MR Relaxometry Study of Muscle Composition and Function in Duchenne Muscular Dystrophy

陳榮邦

**Huang Y;Majumdar S;Genant HK;Chan WP;Sharma
KR;Yu P;Mynhier M;Miller R**

摘要

Abstract

Magnetic resonance imaging and maps of T1 and T2 values were used to study muscle composition in Duchenne muscular dystrophy (DMD). The mean T2 of anterior tibial muscle was 27 msec in healthy control subjects and 43 msec with increased fatty infiltration in DMD patients. In stronger DMD patients, the distribution of muscle T2 values was narrow, centered at 27 msec as in the controls, with a nonoverlapping fat peak centered at 49 msec. In weaker DMD patients, the width of the muscle T2 peak increased and the peak shifted toward the fat peak. Mean muscle T1 decreased from 1.7 to 0.6 second with increasing fatty infiltration. These results show that quantitative T1 and T2 maps may be used to assess muscle status and monitor DMD progression.