MRI findings in throwing shoulders: abnormalities in professional handball players

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Shoulders of throwing athletes are highly stressed joints and likely to have more structural abnormalities seen on magnetic resonance imaging scans. Prevalence and type of structural abnormalities, especially abnormalities of the rotator cuff tendons and the superolateral humeral head, and correlation of magnetic resonance imaging findings with symptoms and clinical tests, are not well known. Throwing and nonthrowing (symptomatic and asymptomatic) shoulders of 30 fully competitive professional handball players and 20 dominant shoulders of randomly selected volunteers were evaluated for comparison clinically and with magnetic resonance imaging. An average of seven abnormal magnetic resonance imaging findings was observed in the throwing shoulders; more than in the nonthrowing and the control shoulders. Although 93% of the throwing shoulders had abnormal magnetic resonance imaging findings, only 37% were symptomatic. Partial rotator cuff tears and mainly superolateral osteochondral defects of the humeral head were identified as typical throwing lesions. Symptoms correlated poorly with abnormalities seen on magnetic resonance imaging scans and findings from clinical tests. This suggests that the evaluation of an athlete's throwing shoulder should be done very thoroughly and should not be based mainly on abnormalities seen on magnetic resonance imaging scans.

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