

MRI Is Cost-Effective in the Diagnosis and Treatment of Tennis Elbow

Lateral epicondylitis, more commonly known as tennis elbow, is a frequent source of elbow pain among athletes. Lateral epicondylitis is caused by chronic overuse or repetitive movements of the arm, forearm, and hand muscles, resulting in injury to the muscles and tendons surrounding the outside of the elbow. Lateral epicondylitis often involves injury to the common extensor tendon (CET) which connects the lateral (outside) forearm muscles to the outside of the elbow (lateral humeral epicondyle). Injuries to the CET can range from mild, degenerative changes to severe, full-thickness tears.

We conducted a study to look at the incidence of CET tears in 52 athletes with lateral epicondylitis. One group of 32 athletes played racquet sports and golf, and a second group of 20 athletes played other sports. There were 58 elbows evaluated overall because some athletes had injuries to both elbows. We hypothesized that there would be more tendon tears in the group playing racquet sports and golf because of the specific demands placed on the elbow in these sports. MRIs of all of the injured elbows were reviewed by radiologists. Overall, 69% of the injured elbows had partial thickness CET tears, with a significantly higher percentage of tears demonstrated by racquet sports and golf athletes compared to athletes playing other sports (78% versus 52%). Injuries to other tendons and ligaments were only documented in 2-5% of cases and did not significantly differ between groups. These results demonstrate that MRI is a powerful tool capable of accurately identifying tendon tears and should be routinely used in the diagnosis of patients with elbow pain. We believe that the development of an evidence-based treatment algorithm based on MRI findings, clinical findings and self-assessment patient questionnaires would improve care, reduce costs, lead to a faster return to athletic activities, and result in higher patient satisfaction.