Tennis elbow

Tennis elbow or lateral epicondylitis is a condition in which the outer part of the elbow becomes sore and tender. Tennis elbow is an acute or chronic inflammation of the tendons that join the forearm muscles on the outside of the elbow (lateral epicondyle). The forearm muscles and tendons become damaged from overuse — repeating the same strenuous motions again and again. This leads to inflammation, pain and tenderness on the outside of the elbow.

Any activity, including playing tennis, which involves the repetitive use of the extensor muscles of the forearm can cause acute or chronic tendonitis of the tendinous insertion of these muscles at the lateral epicondyle of the elbow. The condition is common in carpenters and other laborers who swing a hammer or other tool with the forearm.

Runge is usually credited for the first description of the condition, in 1873.

The term tennis elbow first appeared in an 1883 paper by Major called Lawn-tennis elbow.

Treatment

The effect of electroacupuncture, massage, and blocking therapy used in combination lasted longer, delaying the recurrence of the disease [1)].

Mesenchymal stem cell therapy is a novel regenerative approach for treating tendinopathy. Lee et al. evaluated the safety and efficacy of allogeneic adipose-derived mesenchymal stem cells (allo-ASC) in treating tennis elbow.

Under ultrasound guidance, allo-ASCs mixed with fibrin glue were injected into the hypoechoic common extensor tendon lesions of 12 participants with chronic LE; 6 subjects each were administered 10(6) or 10(7) cells in 1 ml. Safety was evaluated at day 3 and weeks 2, 6, 12, 26, and 52 post-injection. Efficacy was assessed by measuring patients' visual analog scale (VAS) score for elbow pain, modified Mayo clinic performance index for the elbow, and by evaluating longitudinal and transverse ultrasound images of tendon defect areas after 6, 12, 26, and 52 weeks. No significant adverse effects of allo-ASC injection were observed through 52 weeks of follow-up. From baseline through 52 weeks of periodic follow-up, VAS scores progressively decreased from 66.8 ± 14.5 mm to 14.8 ± 13.1 mm and elbow performance scores improved from 64.0 ± 13.5 to 90.6 ± 5.8. Tendon defects also significantly decreased through this period. Allo-ASC therapy was thus safe and effective in improving elbow pain, performance, and structural defects for 52 weeks. This clinical study is the first to reveal therapeutic value of mesenchymal stem cell injection for treating chronic tendinopathy. Stem Cells 2015;33:2995-3005 [2)].

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Li X, Zhou K, Zhang E, Qi Z, Sun W, Xu L, Xu J, Cai Y, Wang R. Therapeutic effect of electroacupuncture, massage, and blocking therapy on external humeral epicondylitis. J Tradit Chin Med. 2014 Jun;34(3):261-6. PubMed PMID: 24992751.
2)
Lee SY, Kim W, Lim C, Chung SG. Treatment of Lateral Epicondylosis by Using Allogeneic Adipose-Derived Mesenchymal Stem Cells: A Pilot Study. Stem Cells. 2015 Oct;33(10):2995-3005. doi: 10.1002/stem.2110. Epub 2015 Aug 6. PubMed PMID: 26202898.