

Elbow Study Annotated Bibliography

Manias P, Stasinopoulos D. A controlled clinical pilot trial to study the effectiveness of ice as a supplement to the exercise programme for the management of lateral elbow tendinopathy. *Br J Sports Med.* 2006;40:81-5.

This article reports the results of a study which evaluated the effectiveness of ice applied after exercises of a rehabilitation program for lateral epicondylitis. The study used forty subjects who had unilateral lateral epicondylitis for four weeks or more to compare exercises to exercises and ice. Subjects were diagnosed with lateral epicondylitis with the resisted middle finger test, Mill's test, Tomsen test and a hand dynamometer. The outcome measures were the analogue visual scale for pain and the dropout rate. The forty subjects were sequentially allocated into two groups: exercise only, and exercise with ice. Both groups were given the same exercises, which consisted of eccentric exercises for wrist extensors and static stretching for the extensor carpi radialis brevis tendon. The subjects were asked to complete the visual analogue scale at weeks zero, which was the baseline, four and sixteen.

The mean baseline VAS value was 8.7 for both groups. Both groups also had a reduction of an average of seven points on the VAS by week four and minimal reductions for week sixteen. The study had no dropouts and each subject remained in his/her assigned group. Thus, the clinicians concluded that ice is not effective in helping to reduce pain for lateral epicondylitis when applied after rehabilitation exercises.

Using the guidelines of the AAOS for levels of evidence, this article is a level III as the subjects were not randomly allocated and blinded. This was a case-control study since the patients were first diagnosed with lateral epicondylitis and then selected for the study and divided into groups.

I would not apply this article to my clinical setting. The subjects that were used were mostly in their early forties which is far older than any of my athletes. The study was only performed for patients with lateral epicondylitis, which does not apply very well to my patient population either. While it is an interesting study in general, I would not apply this to my practice or recommend the study for any of my peers working with high school and college athletes.

Some patient education benefits may be drawn from this article. For those middle aged active adults who like to play tennis and find themselves with lateral epicondylitis, this may be a relevant study. While it does not definitively show that ice is not effective in pain reduction for patients with lateral epicondylitis, it does suggest that exercises are much more important in the treatment of the injury. This can be used to stress the importance of following an exercise program to those patients with lateral epicondylitis.

Critical Appraisal Checklist for Therapeutic Studies

The subjects were not randomly divided into groups. The subjects were grouped in the order that they joined the study, thus every other participant was in the same group. They did, however, all finish the study successfully which was used as part of the outcome measure. The subjects were not able to be blinded as the therapy being studied was ice. The clinicians were also aware of which subjects were part of the ice group and which were not. Both groups were treated equally aside from the ice.

Both groups were similar, the mean age was less than a year different between the groups. However, these subjects were quite different from my patients. The subjects used in the study were much older than my patients and I do not often see lateral epicondylitis in my practice.