Review: viscosupplementation for knee osteoarthritis reduces pain and improves function

Stanford Shoor

Evid. Based Med. 2006;11;12-
doi:10.1136/ebm.11.1.12

Updated information and services can be found at:
http://ebm.bmj.com/cgi/content/full/11/1/12

These include:

Rapid responses
You can respond to this article at:
http://ebm.bmj.com/cgi/eletter-submit/11/1/12

Email alerting service
Receive free email alerts when new articles cite this article - sign up in the box at the top right corner of the article

Topic collections
Articles on similar topics can be found in the following collections

Drugs: musculoskeletal and joint diseases (346 articles)
Osteoarthritis (334 articles)

Notes

To order reprints of this article go to:
http://www.bmjjournals.com/cgi/reprintform

To subscribe to Evidence-Based Medicine go to:
http://www.bmjjournals.com/subscriptions/
In patients with osteoarthritis of the knee, does viscosupplementation (with hyaluronan or hylan [HA]) relieve pain and improve physical function?

**METHODS**

**Data sources:** Medline, EMBASE/Excerpta Medica, PREMEDLINE (to July 2003), Cochrane Central Register of Controlled Trials (Issue 2, 2003), and Current Contents (to September 2000); hand searches of relevant journals, conference proceedings (to April 2004), and reference lists; and consultation with industry representatives.

**Study selection and assessment:** randomised controlled trials (RCTs), in any language, that assessed the use of viscosupplementation for treatment of osteoarthritis of the knee, compared with placebo or active treatment, and reported relevant outcomes. 2 reviewers independently assessed included trials for methodological quality using the Jadad scale.

**Outcomes:** pain and physical function (assessed by the Western Ontario and McMaster Universities [WOMAC] index and the Lequesne index).

**MAIN RESULTS**

63 RCTs met the selection criteria; 37 RCTs compared an HA product with placebo. Compared with placebo, HA improved pain on weight bearing at 1–4 weeks, 5–13 weeks, and 14–26 weeks after the last injection (table). HA improved the Lequesne Index at 1–4 weeks and 5–13 weeks and WOMAC function at 5–13 weeks (table). Efficacy varied by type of HA product (see www.evidence-basedmedicine.com for detailed results). Hyalgan and Hylan G-F 20 both significantly reduced pain on weight bearing more than placebo at all 3 time periods, although the effect size was at least twice as great with the latter product. Artz significantly reduced pain at 5–13 weeks but not at the other 2 time periods. Other individual products were not extensively studied. In direct comparisons between Hylan G-F 20 and a hyaluronan product, the difference in pain on weight bearing was not significant at 1–4 weeks but favoured the Hylan product at 5–13 weeks. This review also presented data comparing HA with intra-articular corticosteroids, non-steroidal anti-inflammatory drugs (NSAIDs), and several other therapies. However, because of variability across trials, meta-analysis was not generally possible.

**CONCLUSION**

In patients with osteoarthritis of the knee, viscosupplementation, with either hyaluronan or hylan products, reduces pain and improves function for up to 26 weeks.