

Title:	Intra-articular viscosupplementation for treatment of osteoarthritis of the knee – March 2003
Agency:	Medical Services Advisory Committee (MSAC) Commonwealth Department of Health and Ageing GPO Box 9848 Canberra ACT 2601 Australia. http://www.msac.gov.au
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Aim

The safety, effectiveness and cost-effectiveness of treating osteoarthritis of the knee with viscosupplements was assessed by systematic literature review.

Conclusions and Results

Viscosupplements may be at least as safe and effective as non-steroidal anti-inflammatory drugs (NSAIDs), intra-articular (IA) corticosteroids or appropriate care, in the short term. However, higher quality research needs to be conducted to verify these observations. No comparisons with COX-2 inhibitors were identified.

Safety: The flawed evidence-base suggests that the viscosupplements, hyaluronic acid (HA) and hylan G-F 20 (a hylan) may have safety benefits over NSAIDs with respect to gastrointestinal adverse events. The risk of local adverse events (eg pain, swelling) associated with HA use was similar to that from IA corticosteroids but significantly higher than experienced with NSAIDs. Results are only suggestive that hylan G-F 20 treatment produces a similar incidence of local adverse events as injection with lower molecular weight hyaluronic acid or with NSAIDs. Hylan G-F 20 combined with appropriate care showed a higher incidence of local adverse events but no difference in systemic adverse events when compared with appropriate care only. Hylan G-F 20 alone showed a lower incidence of systemic adverse events compared with NSAIDs.

Effectiveness: From the limited evidence available, HA was found to as effective as, but no more effective than, NSAIDs at improving patient perceived pain scores, physical function, patient global assessment or stiffness scores. HA was found to be as effective as IA corticosteroids for alleviating night, rest and touch pain but showed a trend for reduced risk of pain under load. HA improved physical functioning and patient global assessment scores in comparison to IA corticosteroids. Treatment with hylan G-F 20 alone is no more effective in improving outcome measures of pain, global assessment, physical function or stiffness than treatment with NSAIDs. Comparison with a lower molecular weight HA is inconclusive due to poor data reporting. The combination of hylan G-F 20 with appropriate care produced significant improvements in pain, global assessment, physical function and stiffness compared to appropriate care alone. However, these results are questionable due to potential bias inherent in the study design.

Cost-effectiveness: Little valid information on the cost-effectiveness of viscosupplementation products could be obtained from the existing literature. Wide variations in the incremental effectiveness of interventions led to different incremental cost-effectiveness ratios. Issues of study quality made the resulting data unreliable. Therefore, a viscosupplementation cost estimate was calculated over a 1-year time period in comparison to NSAIDs, COX-2 or IA corticosteroids. Per year for the entire population of knee OA sufferers in Australia, one or more courses of viscosupplementation was determined to be the most expensive treatment option.

Recommendations

On the strength of evidence pertaining to intra-articular viscosupplementation for treatment of osteoarthritis of the knee, public funding was not supported for this procedure at this time.

Methods

Medline, Embase, Current Contents, Cochrane Library, SSCI, ProceedingsFirst, internet databases and sites, and reference lists were searched from 1966-2002. Study selection followed a protocol. The evidence was assessed and classified using the dimensions of evidence defined by the National Health and Medical Research Council. Study quality was appraised using standard checklists and the clinical importance and relevance of the benefit (or harm) was also assessed.

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