Intra-articular viscosupplementation with hylan G-F 20 to treat osteoarthritis of the knee: an evidence-based analysis

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Authors' objectives
The aim of this review was to assess the effectiveness and cost-effectiveness of hylan G-F 20 as a substitute for existing treatments for pain due to osteoarthritis (OA) of the knee, other viscosupplementation devices, and/or as an adjunct to conventional therapy.

Authors' conclusions
When the benefits relative to the risks and costs are considered, NSAIDs and hylan G-F 20 appear comparable. Consequently, there's little evidence on which to recommend hylan G-F 20 over NSAIDs, except perhaps for patients who cannot tolerate NSAIDs, although this evidence is indirect, since no studies looked specifically at this population. Intra-articular steroids appear to deliver the same risks and clinical benefits as hylan G-F 20 at a lower cost; therefore, there's evidence that intra-articular steroids are the preferred option. Hylan G-F 20 as an adjunct to conventional care appears to deliver some clinical benefit, although funding hylan G-F 20 as an adjunct would have considerable budget impact, so the benefits of this option do not clearly outweigh the costs. There's some uncertainty about the effect of hylan G-F 20 relative to other hyaluronans, mostly because some of the trials of this comparison were not published. Many of the studies of hylan G-F 20 have considerable methodological limitations that result in uncertainty about the magnitude of effect. An upcoming review of the evidence by the Osteoarthritis Advisory Panel of clinical experts will likely help to reduce some of this uncertainty. There is moderate evidence that hylan G-F 20 is no more clinically effective than NSAIDs. The evidence that hylan G-F 20 may be an appropriate option for people with OA of the knee who cannot tolerate NSAIDs is indirect. The possible benefit of fewer cases of NSAID-induced gastropathy in this population must be weighed against the uncertainty of a severe inflammatory adverse reaction to hylan G-F 20. Similarly, there is moderate evidence that hylan G-F 20 is no more clinically effective than intra-articular corticosteroid. The lower cost of intra-articular corticosteroids makes them the preferred option. There is moderate evidence that hylan G-F 20 is effective as an adjunct to conventional care, delivering a small magnitude of temporary relief at 4 to 26 weeks after treatment. The estimated additional cost to the system of providing hylan G-F 20 as an adjunct to conventional care is about $700 (Canadian) per patient annually. The magnitude and duration of clinical benefit of hylan G-F 20 must be weighed against the uncertainty and potential magnitude of the budget impact (about $35 million to $105 million (Canadian) per year) of funding this device given the high burden of OA in Ontario adults. There is level 2 evidence that hylan G-F 20 is no effective in people with advanced OA for whom total knee replacement is indicated.

Final publication URL

INAHTA brief and checklist

Additional data URL
http://www.hqontario.ca/evidence/publications-and-ohtac-recommendations/ohtas-reports-and-ohtac-