CADTH
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Prolotherapy for the Management of Musculoskeletal Pain: A Review

Context

Chronic musculoskeletal pain is associated with loss of productivity, reduced performance when at work, and a lower quality of life. Low back pain, osteoarthritis, and tendinopathy (a painful condition in and around a tendon) are types of chronic musculoskeletal pain. Musculoskeletal disorders were estimated to cost Canadians nearly $21 billion dollars in 2005.

Technology

Prolotherapy is an injection therapy that can be used in chronic musculoskeletal conditions. The injections are delivered over multiple sessions and are used to deliver an irritant into ligaments, tendons, or adjacent joint spaces.

The injected irritant solution varies by condition, severity, and health care provider preference but typically contains dextrose or sodium morrhuate (a mixture of the sodium salts of saturated and unsaturated fatty acids of cod liver oil). The injections are thought to promote musculoskeletal repair and reduce pain.

Issue

A review of the clinical evidence on the use of prolotherapy for chronic musculoskeletal pain will help to inform decisions about managing pain in these patients.

Methods

A limited literature search was conducted of key resources, and titles and abstracts of the retrieved publications were reviewed. Full-text publications were evaluated for final article selection according to predetermined selection criteria (population, intervention, comparator, outcomes, and study designs).

Key Messages

For low back pain, tendinopathy, and osteoarthritis:

- Prolotherapy containing dextrose may be more effective for pain relief when compared with saline injections or exercise, or when compared with pain levels before prolotherapy treatment (based on limited evidence).
- The effectiveness of prolotherapy compared with corticosteroid injections is not known.

Results

The literature search identified 190 citations, with no additional articles identified from other sources. After screening the abstracts, 16 of the studies met the criteria for inclusion in this review: 1 systematic review, 7 randomized controlled trials, and 8 case series.

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