Usefulness of intra-articular botulinum toxin injections: A literature review

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Background: Botulinum toxin is a proven and widely used treatment for numerous conditions characterized by excessive muscular contractions. Recent studies have assessed the analgesic effect of botulinum toxin in joint pain and started to unravel its mechanisms.

Literature Search Methodology: We searched the international literature via the Medline database using the term “intra-articular botulinum toxin injection” combined with any of the following terms: “knee”, “ankle”, “shoulder”, “osteoarthritis”, and “adhesive capsulitis of the shoulder”.

Results: Of 16 selected articles about intra-articular botulinum toxin injections, 7 were randomized controlled trials done in patients with osteoarthritis, adhesive capsulitis of the shoulder, or chronic pain after joint replacement surgery. Proof of antinociceptive effects was obtained in some of these indications and the safety and tolerance profile was satisfactory. The studies were heterogeneous. The comparator was usually a glucocorticoid or a placebo; a single study used hyaluronic acid. Pain intensity was the primary outcome measure.

Discussion & Conclusion: The number of randomized trials and sample sizes are too small to provide a satisfactory level of scientific evidence or statistical power. Unanswered issues include the effective dosage and the optimal dilution and injection modalities of botulinum toxin.

Biography
Hichem Khenioui is a specialist practising at the Physical Medicine and Rehabilitation Department of Saint Philibert Hospital and teaching at the Catholic University of Lille. He is an expert on Spasticity Management and Orthopedic Disorders. Pain management is one of his center of interest, in particular, the use of botulinum toxin injection on neuropathic pain.

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