Abstract

Pain Physician. 2012 Mar-Apr;15(2):E115-29.

Ozone therapy as a treatment for low back pain secondary to herniated disc: a systematic review and meta-analysis of randomized controlled trials.

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Abstract

BACKGROUND: Low back pain (LBP) is one of the most common and important health problems affecting the population worldwide and remains mostly unsolved. Ozone therapy has emerged as an additional treatment method. Questions persist concerning its clinical efficacy.

OBJECTIVE: The purpose of our study was to evaluate the therapeutic results of percutaneous injection of ozone for low back pain secondary to disc herniation.

STUDY DESIGN: A systematic review and meta-analysis of randomized controlled trials.

METHODS: A comprehensive literature search was conducted using all electronic databases from 1966 through September 2011. The quality of individual articles was assessed based on the modified Cochrane review criteria for randomized trials and criteria from the Agency for Healthcare Research and Quality.

OUTCOME PARAMETERS: The outcome measure was short-term pain relief of at least 6 months or long-term pain relief of more than 6 months.

RESULTS: Eight observational studies were included in the systematic review and 4 randomized trials in the meta-analysis. The indicated level of evidence for long-term pain relief was II-3 for ozone therapy applied intradiscally and II-1 for ozone therapy applied paravertebrally. The grading of recommendation was 1C for intradiscal ozone therapy and 1B for paravertebral ozone therapy.

LIMITATIONS: The main limitations of this review are the lack of precise diagnosis and the frequent use of mixed therapeutic agents. The meta-analysis included mainly active-control trials. No placebo-controlled trial was found.

CONCLUSIONS: Ozone therapy appears to yield positive results and low morbidity rates when applied percutaneously for the treatment of chronic low back pain.

Comment in

The major efficient mechanisms of ozone therapy are obtained in intradiscal procedures. [Pain

Physician. 2012]

PMID: 22430658 [PubMed - indexed for MEDLINE] **Free full text**

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