

A 5 and 10-Year Follow-Up on Intradiscal Ozone Injection for Disc Herniation

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Introduction

Disc herniation is the most common cause for spinal surgery and many clinicians employ epidural steroid injections with limited success. Intradiscal injection of ozone gas has been used as an alternative to epidural steroids and surgical discectomy. Early results are positive but long-term data are limited.

Patients and Methods

A total of 108 patients with confirmed contiguous disc herniation were treated with intradiscal injection of ozone in 2002 to 2003. Around 107 patients were available for telephone follow-up at 5 years; 60 patients were available for a similar telephone follow-up at 10 years. Patients were asked to describe their clinical outcome since the injection. Surgical events were documented. MRI images were reviewed to assess the reduction in disc herniation at 6 months.

Results

MRI films demonstrated a consistent reduction in the size of the disc herniation. A total of 79% of patients had a reduction in herniation volume and the average reduction was 56%. There were 19 patients that ultimately had surgery and 12 of them occurred in the first 6 months after injection. One of these 12 was due to surgery at another level. Two surgeries involved an interspinous spacer indicated by stenosis or DDD. All other surgeries were discectomies. Of the patients that avoided surgery 82% were improved at 5 years and 88% were improved at 10 years. Other than subsequent surgeries, no spine-related complications were experienced.

Conclusion

We conclude that ozone is safe and effective in approximately 75% of patients with disc herniation and the benefit is maintained through 10 years. This is a retrospective review and randomized trials are needed.

Clinical Relevance: Intradiscal ozone injection may enable patients to address their pain without multiple epidural injections and surgery. The benefit of ozone is durable and does not preclude future surgical options. The risk reward profile for this treatment is favorable.