Objective: This study was performed to collect 5-year follow-up on patients with lumbar disc herniation treated with intradiscal injection of ozone gas.

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

Methods: Ninety-five patients with confirmed contiguous disc herniation were treated with intradiscal injection of ozone in 2002. Eighty-seven patients were available for telephone follow-up at 5 years and a chart review was performed. Patients were asked to describe their clinical outcome since the injection. Surgical interventions were documented. Available MRI films were collectively reviewed to assess the reduction in disc herniation at six months.

Results: Of the 87 responders at 5 years, 63 (72%) reported being 'much better,' 3 (3%) were 'better,' 8 (9%) had no improvement and 13 (15%) went on to surgery. There were 12 discectomies and one fusion, with 10 of the 13 surgeries occurring within the first year. Two patients had a second intradiscal ozone injection for an average of 1.02 injections per patient. MRI films demonstrated a consistent reduction in the size of the disc herniation. Seventy-nine percent of patients had a reduction in herniation volume and the average reduction was 56%. Other than subsequent surgeries typically associated with these patients, no complications were experienced.

Conclusion: Ozone is a conservative alternative to surgical discectomy for many patients. The gas reduced the size of the disc herniation. Randomized trials are required to gain wider acceptance of this treatment option.