

PROCEEDINGS OF THE 5TH WFOT MEETING; 2016 NOV 18-20; MUMBAI, INDIA

The efficacy of Ozone Therapy on different types of lumbar disc herniation: Proposal for guidance updates

He Xiaofeng

Department of Interventional Therapy, Nanfang Hospital, Southern Medical University, Guangzhou, China.

ABSTRACT

OPEN ACCESS

Citation

He X. The Efficacy of Ozone Therapy on different types of lumbar disc herniation: Proposal for Guidance Updates [abstract]. Proceedings of the 5Th WFOT Meeting; 2016 Nov 18-20; Mumbai, India. J Ozone Ther. 2018;2(2). doi: 10.7203/jo3t.2.2.2018.11134

Academic Editor

Jose Baeza-Noci,
School of Medicine, Valencia
University, SPAIN

Editor

World Federation of Ozone
Therapy, Bolgna, ITALY

Received

December 10, 2017

Accepted

December 11, 2017

Published

March 4, 2018

Intellectual Property

He Xiaofeng. This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Author Information

ozonetherapy@126.com

Objective: To explore the possible mechanisms of pain relief by ozone therapy in patients with different types of lumbar intervertebral disc protrusion.

Methods: The medical records of a total of 250 patients with protrusion of lumbar intervertebral disc (159 males, 91 females, aged 14–85 years) admitted in the South Hospital from January 2009 to June 2014 were retrospectively reviewed. Patients with protrusion of lumbar intervertebral disc were divided into four groups according to T2-weighted magnetic resonance imaging and digital subtraction angiography findings during ozone injection: type I, fibrous ring rupture without nucleus pulposus protrusion; type II, fibrous ring rupture with nucleus pulposus protrusion; type III, non-ruptured fibrous ring without nucleus pulposus protrusion; and type IV, non-ruptured fibrous ring with nucleus pulposus protrusion. Visual analogue scale (VAS) pain scores were used to evaluate treatment efficacy among patients with different types of lumbar intervertebral disc protrusion before surgery, and at 1 week, 1 month, 6 months, and 12 months after surgery.

Results: Atrophy of the nucleus pulposus was observed in 63% of type II and IV patients within 1 year after surgery. The VAS scores at 1 week, 1 month, 6 months, and 12 months after surgery decreased by an average of 4.47, 4.41, 4.77, and 4.85 for type I to IV disease, respectively. More specifically, scores of type I patients were decreased by 4.57, 4.72, 4.98, and 4.93, respectively, during the follow-up period. Scores of type II patients were decreased by 4.78, 4.61, 5.08, and 5; type III cases by 3.72, 3.97, and 4.84, respectively; and type IV cases by 4.24, 4.10, 4.45, and 4.41, respectively. In addition, the postoperative VAS score of 94.4%, 91.6%, 89.6% and 90.8% of patients were decreased by > 25%, i.e., the pain was alleviated, with type I patients demonstrating a pain relief rate of 96.3% during the entire follow-up period, along with 93.5% and 89.8%, and 89.8%, respectively for type II patients, 76.9%, 84.6%, 76.9%, and 87.2%, respectively for type III patients, and 77.6%, 79.6%, 79.6%, and 79.6%, respectively for type IV patients.

Conclusion: Ozone therapy is an effective pain-relief therapy for lumbar intervertebral disc protrusion. The degree of pain relief was closely related to rupture of the fibrous ring and protrusion of the nucleus pulposus. Pain relief efficacy was improved in patients with fibrous ring rupture and nucleus pulposus, while the pain relief effects in patients without fibrous ring rupture or nucleus pulposus protrusion were poor.

Keywords: ozone injections; lumbar disc herniation; pain