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Ozone mechanism of action on Herniated Disc: clinical and instrumental data [abstract]

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ABSTRACT

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Purpose. Recently, O_2O_3 has been successfully used in the treatment of Low Back Pain, reducing pain after the failure of other conservative treatments. Majority of LBP patients are affected by disc herniation (DH). O_2O_3 can stop pain caused by the Intervertebral Disc Degeneration (IDD), associated or not to extrusions of nucleus pulpous, causing inflammatory changes.

Our primary purpose is to understand how ozone affects IDD.

Materials and methods. Bilateral intramuscular O_2O_3 infiltrations, injected on the disk lesion with a paravertebral approach. An O_2O_3 mixture at a rate of 20 µg/mL was obtained by means of an Ozone generator.

Results. A good reduction of pain and a significant improvement of life quality was obtained in patients with IDD treated with intramuscular infiltrations of O_2O_3.

O_2O_3 therapy restricts production of pro-inflammatory substances from hernia, which are responsible for the painful symptoms and functional impairments.

Discussion. Contrary to popular knowledge, painful symptoms improvements are as a result of loss of bio humoral inflammation factors and not the reduction of mechanical nerve pressure.

Conclusion. The action of O_2O_3 is performed in a developed fibrous tissue in the disc herniation. This would prevent the production of pro inflammatory substances by the hernia itself, thus explaining the disappearance of the painful symptoms in the absence of volumetric reduction of the hernia. It is also shown by the persistence of the mechanical pressure on the nerve notwithstanding the disappearance of the inflammation and pain symptoms.