

Ozone Therapy for Herpes Zoster: case report

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Abstract: Herpes zoster (HZ) is a secondary manifestation of a primary infection with varicella-zoster virus (VZV). HZ is caused by reactivation of VZV in the cranial nerves and dorsal spinal root ganglia. VZV, a human herpes virus (HHV3 - Human Herpes Virus 3) has a double-stranded linear DNA molecule (Wolff, 1999), has a bilayer lipid shell with surface glycoproteins and an icosahedral capsid. When VZV-specific cellular immunity is impaired, the onset of the disease occurs. A number of therapeutic approaches were available, showing little evidence of effectiveness. However, some therapies seems to be more effective, decreasing the extent and time duration of symptoms and, putatively, the risk of chronic sequelae [e.g. Post-herpetic neuralgia (NPH)]. Ozone has been shown to have an antibacterial and antiviral effect. Antiviral chemotherapy is based on acyclovir, valacyclovir or famcyclovir, with or without prednisolone, but they have little effect on the healing of skin lesions or pain (Wood, Johnson, McKendrick, Taylor, Mandal & Crooks, 1994). Most viruses coated by a lipid envelope in aqueous media are more sensitive to ozone, given their oxidant capacity over glycoproteins and lipoproteins (Wells, Latino, Gavalchin & Poiesz, 1991), however, virucidal activity becomes uncertain when viruses are in biological fluids or are intracellular. Effectiveness of ozone therapy through injections of the oxygen-ozone mixture has shown (vg. Konrad, 1995; Petry, Rossato, Nespolo, Kreutz, & Bertol, 2014) and topical applications of ozonated sunflower oil as well (Matsumoto, Sakurai, Shinriki, Suzuki & Miura, 2001). We report a case study of a patient with cutaneous manifestations of HZ, with improvement of the clinical feature after therapy with ozone.

A 70-year-old caucasian female patient was referred to the clinic with a history of pruritus, burn sensation, sharp pain in the lumbar region and left flank. Physical examination of the skin showed a dermatological eruption, with pustules, ulceration and crusting, in the affected region. The patient also found numbness and tingling in the same place. These symptoms were accompanied by fatigue. The patient reported a history of VZV infection during childhood. The therapeutic procedure to be applied, initiated after informed consent of the patient, was presented. The possibility of voluntary interruption was assured, as well as the report of any clinical manifestation concomitant with the therapeutic procedure was advised. The therapeutic protocol consisted of the following: daily intake of 20 mL of ozonated olea europea and helianthus annuus in ampoules and topical application of ozonized oil (olea europea and helianthus annuus), with previous hygiene through an ozonized soap. No viral chemotherapy performed or administration of non-steroidal anti-inflammatory drugs.

The administration of ozone seems to accelerate the healing of cutaneous lesions, limiting the severity and acute pain. During the therapeutic intervention a pigmentation alteration (post-inflammatory) was observed along the affected dermatome. Since ozone promotes the oxidation of viral components, a favorable therapeutic result was obtained by oral administration of ampoules, without resorting to an invasive procedure - injection of an ozone-oxygen mixture. The results obtained in this patient are encouraging for future clinical trials, double blind, and eventually with placebo groups and of drugs already tested for effectiveness evaluation.

Keywords: *Herpes zoster, ozone therapy, therapeutic indications*

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