

Short time recovery from severe knee algodystrophy treated with ozone-oxygen autohemotherapy

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Abstract

We report a case of a 30-year-old man with algodystrophy of the left knee, who had complete recovery after 6-week treatment with ozone-oxygen autohemotherapy.

Case Report

A 30-year-old man came to our attention one month after accidental trauma of the left knee. The patient was reporting pain on walking and standing up with numeric rating score for pain (NRS)=9, and 6-7 on resting. Physical examination showed swollen left knee with increased skin temperature, pain on deep pressure and light stiffness during movement of bending and extending.

Magnetic resonance imaging (MRI) of the left knee showed extensive bone marrow edema of the condilus tibialis (Figure 1). No lesions of muscle, ligaments, or cartilage, or free fluid in the articular cavity were found.

Patient was diagnosed with algodystrophy, and ozone-oxygen autohemotherapy was started immediately.

Ozone was generated by Medical 95 CPS Computerized Photometric System manufactured by Multiossigen (Gorle, Italy). Autohemotherapy Bags SANO3 CEE93/42 certified were used.

Treatments were given twice a week; ozone was mixed with blood,

in agreement with the Scientific Society of Ozone Oxygen Therapy (SIOOT) protocol,¹ by using 10,000 µg dose for each infusion.

After the 4th infusion pain was greatly reduced, NRS=3 on activity and standing up and 1 during rest. Also swelling and movement impairment were reduced. After the 6th treatment patient was pain free and the other clinical signs disappeared. However, ozone-oxygen autohemotherapy was continued until the 10th session was completed.

At this point the MRI demonstrated resolution of the bone marrow edema (Figure 2). The patient was considered healed and ozone-oxygen autohemotherapy stopped.

At a later control, 6 months after ozone-oxygen autohemotherapy had been stopped, the patient was still pain free and in full activity.

Discussion

Algodystrophy is characterized by joint pain following trauma or surgery² and it is a disease highly debilitating and difficult to treat. Severe forms of algodystrophy may involve skin and soft tissue (complex regional pain syndrome type I), sometimes with nerve damage (complex regional pain syndrome type II).

The evolution of algodystrophy is very slow, but generally benign. However, pain can last for several months, or years, causing distress, inability and change in psychological status. Various different treatments, alone, or in association, including bisphosphonate, analgesic, local anesthetics, physical therapy and neuromodulation have been proposed, with different, but not satisfactory, results.^{3,4}

Recently a double-blind placebo controlled study showed the efficacy of neridronate to reduce pain of 50% at 40 days after treatment. This study represents, so far, the best-controlled clinical evidence of therapeutic effect.

Ozone-oxygen therapy is well known for its various applications in medicine, including vascular, inflammatory and nervous system degenerative disease, as well as intervertebral disc hernia, in agreement with the Scientific Society of Oxygen Ozone Therapy.⁵ Therefore, the use of ozone-oxygen in algodystrophy seems to be rationale.

In this case ozone-oxygen autohemotherapy obtained a very remarkable effect in a short time. Ozone-oxygen reduced pain more than 70% on walking and standing up, and more than 85% on rest after 2 weeks. Moreover, pain disappeared after three weeks, with full recovery of patient at 6 weeks, and 6 months later.

Conclusions

This case suggests the need of more extensive controlled studies of ozone-oxygen autohemotherapy on algodystrophy, considering also the association with neridronate, for the best future therapeutic results.

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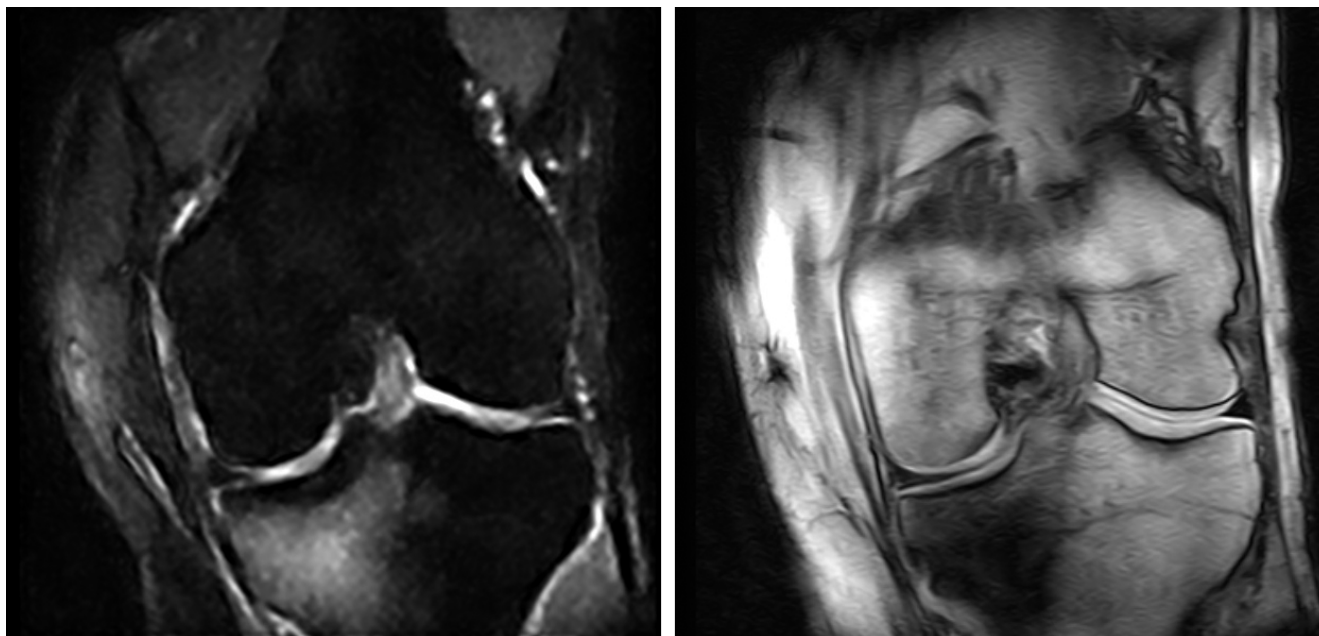


Figure 1. Magnetic resonance imaging of the left knee showing extensive bone marrow edema of the condylus tibialis.

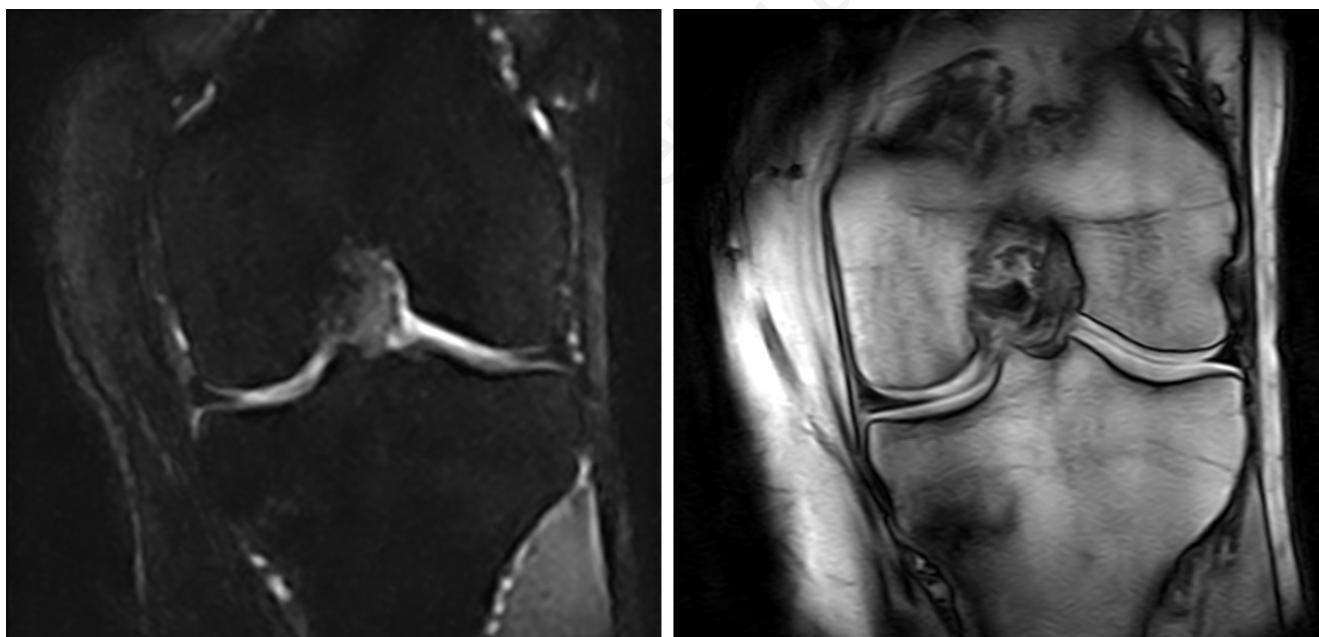


Figure 2. Magnetic resonance imaging showing resolution of the bone marrow edema.

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