**HYPERBARIC OXYGEN THERAPY FOR OSTEOMYELITIS OF THE MANDIBLE**

**Evaluation of hyperbaric oxygen therapy in treatment of patients with osteomyelitis of the mandible].**

[Article in German]

[Handschel J](http://www.ncbi.nlm.nih.gov/pubmed/?term=Handschel%20J%5BAuthor%5D&cauthor=true&cauthor_uid=17786490)1, [Brüssermann S](http://www.ncbi.nlm.nih.gov/pubmed/?term=Br%C3%BCssermann%20S%5BAuthor%5D&cauthor=true&cauthor_uid=17786490), [Depprich R](http://www.ncbi.nlm.nih.gov/pubmed/?term=Depprich%20R%5BAuthor%5D&cauthor=true&cauthor_uid=17786490), [Ommerborn M](http://www.ncbi.nlm.nih.gov/pubmed/?term=Ommerborn%20M%5BAuthor%5D&cauthor=true&cauthor_uid=17786490), [Naujoks C](http://www.ncbi.nlm.nih.gov/pubmed/?term=Naujoks%20C%5BAuthor%5D&cauthor=true&cauthor_uid=17786490), [Kübler NR](http://www.ncbi.nlm.nih.gov/pubmed/?term=K%C3%BCbler%20NR%5BAuthor%5D&cauthor=true&cauthor_uid=17786490), [Meyer U](http://www.ncbi.nlm.nih.gov/pubmed/?term=Meyer%20U%5BAuthor%5D&cauthor=true&cauthor_uid=17786490).

**Abstract**

**BACKGROUND:**

Chronic osteomyelitis of the jaw is a relapsing disease with multiple treatment strategies described in the literature. Hyperbaric oxygen therapy is one of them. The purpose of this study was to evaluate the clinical outcome of hyperbaric oxygen therapy in these patients.

**METHOD:**

All patients with a chronic osteomyelitis of the mandible who received in our department hyperbaric oxygen therapy between 2000 and 2004 were included in this study. The clinical outcome (lack of symptoms e.g. pain, swelling, etc.) was the pivotal evaluation parameter. All patients were divided in three groups according to their medical history. Group 1: All patients with osteomyelitis of the mandible, who received no treatment before. Group 2: All patients with one local relapse, who received only antimicrobial treatment. Group 3: Patients with at least one local relapse after antimicrobial and surgical treatment.

**RESULTS:**

27 patients were evaluated in this study. Seven out of 13 patients in group 1 were relapse free after performing 40 hyperbaric oxygen therapies. However, only 4 of 9 patients in group 3 were relapse free after treatment. In group 2 the hyperbaric oxygen therapy was successful particularly in the younger patients (3 of 4).

**CONCLUSION:**

Adjuvant hyperbaric oxygen therapy was successful in the treatment of patients with chronic recurrent osteomyelitis of the mandible. Therefore, it is a treatment option which can avoid ablative surgery in some cases.

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**Hyperbaric oxygen treatment of chronic osteomyelitis of the jaws.**

[Van Merkesteyn JP](http://www.ncbi.nlm.nih.gov/pubmed/?term=Van%20Merkesteyn%20JP%5BAuthor%5D&cauthor=true&cauthor_uid=6437999), [Bakker DJ](http://www.ncbi.nlm.nih.gov/pubmed/?term=Bakker%20DJ%5BAuthor%5D&cauthor=true&cauthor_uid=6437999), [Van der Waal I](http://www.ncbi.nlm.nih.gov/pubmed/?term=Van%20der%20Waal%20I%5BAuthor%5D&cauthor=true&cauthor_uid=6437999), [Kusen GJ](http://www.ncbi.nlm.nih.gov/pubmed/?term=Kusen%20GJ%5BAuthor%5D&cauthor=true&cauthor_uid=6437999), [Egyedi P](http://www.ncbi.nlm.nih.gov/pubmed/?term=Egyedi%20P%5BAuthor%5D&cauthor=true&cauthor_uid=6437999), [Van den Akker HP](http://www.ncbi.nlm.nih.gov/pubmed/?term=Van%20den%20Akker%20HP%5BAuthor%5D&cauthor=true&cauthor_uid=6437999), [De Man K](http://www.ncbi.nlm.nih.gov/pubmed/?term=De%20Man%20K%5BAuthor%5D&cauthor=true&cauthor_uid=6437999), [Panders AK](http://www.ncbi.nlm.nih.gov/pubmed/?term=Panders%20AK%5BAuthor%5D&cauthor=true&cauthor_uid=6437999), [Lekkas KE](http://www.ncbi.nlm.nih.gov/pubmed/?term=Lekkas%20KE%5BAuthor%5D&cauthor=true&cauthor_uid=6437999).

**Abstract**

A review of the literature on treatment of chronic osteomyelitis of the jaws shows that hyperbaric oxygen is often recommended as an adjunct in treatment of this disease. Definite criteria to indicate this treatment and to evaluate the results have not been reported. The results of hyperbaric oxygen treatment of chronic osteomyelitis of the jaws in 16 patients are presented. In contrast to the good results reported in the literature, only 7 of our patients could be considered as cured. The reasons for this discrepancy are discussed. Our results, as well as the data from the literature, indicate that a combined antibiotic and surgical approach is the treatment of choice in chronic supportive osteomyelitis. However, in chronic diffuse sclerosing osteomyelitis and in patients in whom decortication and antibiotic therapy have failed, hyperbaric oxygen treatment in combination with antibiotics and surgery seems to be indicated.

OI:

gangrene, as also for traumatic wounds, crush injury, compartment syndrome, compromised skin grafts and flaps and thermal burns. Another major area of application of HBOT is radiation-induced wounds, specifically osteoradionecrosis of mandible, radiation cystitis and radiation proctitis. With the increase in availability of chambers across the country, and with increasing number of studies proving the benefits of adjunctive use for various kinds of wounds and other indications, HBOT should be considered in these situations as an essential part of the overall management strategy for the treating surgeon.