Hypnosis in the management of persistent idiopathic orofacial pain – Clinical and psychosocial findings

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Abstract

This controlled and patient blinded study tested the effect of hypnosis on persistent idiopathic orofacial pain (PIOP) in terms of clinical and psychosocial findings. Forty-one PIOP were randomized to active hypnotic intervention or simple relaxation as control for five individual 1-h sessions. Primary outcome was average pain intensity scored three times daily in a pain diary using visual analogue scale (VAS). Secondary outcome measures were pain quality assessed by McGill pain questionnaire (MPQ), psychological symptoms assessed by symptom check list (SCL), quality of life assessed by SF36, sleep quality, and consumption of analgesic. Data were compared between groups before and after treatment using ANOVA models and paired t-tests. The change in VAS pain scores from baseline to the last treatment (t4) was (33.1 ± 7.4%) in the hypnosis group and (3.2 ± 5.4%) in the control group (P < 0.03). In the hypnosis group, highly hypnotic susceptible patients had greater decreases in VAS pain scores (55.0 ± 12.3%) when compared to less susceptible patients (17.9 ± 6.7%) (P < 0.02). After the last treatment there were also statistically significant differences between groups in perceived pain area (MPQ) and the use of weak analgesics (P < 0.03). There were no statistically significant changes in SCL or SF36 scores from baseline to t4. In conclusion, hypnosis seems to offer clinically relevant pain relief in PIOP, particularly in highly susceptible patients. However, stress coping skills and unresolved psychological problems need to be included in a comprehensive management plan in order also to address psychological symptoms and quality of life.

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1. Introduction

Chronic orofacial pain can be very difficult to diagnose and manage since the patients often present very complex and diffuse symptoms without any radiological or clinical pathological findings (Madland et al., 2001). Patients suffering from chronic pain conditions often find their pain intolerable and with great impact on their quality of life (Breivik et al., 2006). Frequently, patients with chronic orofacial pain have tried various kinds of treatments, such as surgery and standard pharmacological treatment with no or little effect on the pain (Hunt, 1992). In addition, mental health plays an important role in maintaining or aggravating chronic pain (Grzesiak, 1991) and there is evidence that cognitive-behavioral intervention can be effective (Dworkin et al., 1994; Turner et al., 2005). Another possible intervention is hypnosis, which is suggested to be effective for chronic pain (National Institutes of Health, 1995). In a review where the effectiveness of hypnosis on various pain conditions was discussed, the authors found that hypnotic intervention provided substantial pain relief in 75% of the patients (Montgomery et al., 2000). Another recent review of controlled clinical trials in
chronic pain conditions such as migraine, arthritis, low back pain, and cancer has discussed significant reductions in perceived pain with hypnotic analgesia treatment compared to no-treatment or other non-hypnotic interventions (Jensen and Patterson, 2006). However, there is a lack of evidence for the effect of hypnosis on persistent idiopathic orofacial pain (PIOP). A few case reports (Cohen and Hillis, 1979; Gurian, 1985), a pilot study (Clarke and Reynolds, 1991), and two studies of temporomandibular disorders (TMD) have reported some effect of hypnosis (Simon and Lewis, 2000; Wincur et al., 2002). Thus, there is some indication that hypnosis may be an option in the management of PIOP, but systematically performed randomized controlled trials are needed.

The aim of this study was in a patient blinded, controlled, and randomized study to test the hypothesis that treatment with hypnosis in patients suffering from PIOP could improve self-reported measures of pain (primary outcome parameter), use of analgesics, sleep quality, health related quality of life, as well as psychological symptoms (secondary outcome parameters). Furthermore, we wanted to explore the relation between hypnotic susceptibility, pain coping strategies, and primary outcome parameters.

2. Materials and methods

2.1. Subjects

The study protocol and recruitment of patients were approved by the local Ethical Committee. All patients signed a written informed consent and the study was performed in accordance with the Declaration of Helsinki.

Forty-four patients with PIOP were referred to the Department of Clinical Oral Physiology at the School of Dentistry in Aarhus, Denmark, and included in the study. The patients had been suffering from PIOP for more than 6 months with no pathological findings in clinical and radiological examinations in accordance with the following criteria suggested by The International Headache Society, (2004): (1) Facial pain present daily for at least 1 month and persisting for all or most of the day. (2) The pain is deep and poorly localized of moderate or severe intensity, but not unbearable. (3) The pain is confined at onset to a limited area on one side of the head. (4) The pain is without paroxysms, precipitation from trigger areas, autonomic symptoms, sensory loss, and other physical signs; but dysaesthesia may occur. The pain was expressed as atypical facial pain, atypical odontalgia, stomatodynia, or in combination with TMD pains.

2.2. Experimental design

Patients were randomly assigned to a hypnosis group \((n = 22)\) or a control group with only relaxation as intervention \((n = 22)\). There was a dropout of three patients in the control group after the first session; one due to private problems and two because they experienced the treatment would not give them any benefit. Data from these three patients were therefore not included in the study. The subjects were blinded to the treatment and had no previous experience with hypnosis. The subjects were informed that two types of hypnotic treatment were tested; one with an audio-CD with which they could practice hypnosis at home and another without the CD. The subjects in the control group believed that they received hypnotic intervention. The clinician was blinded to the hypnotisability during treatment. All data were entered by a blinded assistant.

2.3. Hypnotic intervention

2.3.1. Hypnosis group

The hypnotic intervention consisted of progressive relaxation, guided imaginary instructions of a nice safe place, pain suggestions of controlling or changing the pain perception tailored individually and dissociation from the pain (Price and Barber, 1987; Crasilneck, 1995). During the trance state, it was attempted to improve the patient’s individual coping with minor psychological problems and their stress-management skills in daily life according to their needs. Individual CDs with the patient’s preferred pain suggestions were made and used to practice hypnosis at home (Zachariae et al., 1996) (for further information, see Appendix A). The group had on average 5.1 ± 0.8 (range 3–6) sessions of hypnotic intervention. Five treatment sessions were planned. However, a range in treatment sessions occurred since some patients did not complete all sessions. Furthermore some patients were given an extra treatment session since the treating clinician had to go on sick leave during treatment.

2.3.2. Control group

The control group had on average 5.3 ± 0.9 sessions (range 3–6) with relaxation and visualizing a nice safe place, however, no further suggestions were given during trance. Likewise five treatment sessions were planned, but a range of three to six sessions also occurred in this group.

2.4. Self-reported pain

2.4.1. Pain diary

The patients completed a paper diary of self-reported pain using a 0–10 visual analogue scale (VAS) (Price et al., 1983) three times a day beginning 6 days before treatment start and throughout the treatment period. The diary was checked at every session. The average daily VAS pain scores from 6 days in each of the following periods: before treatment \((t0)\), after treatment 1 \((t1)\), after treatment 2 \((t2)\), after treatment 3 \((t3)\), and after last treatment \((t4)\) were used as the primary outcome parameter.

2.4.2. McGill pain questionnaire

A Danish version of McGill pain questionnaire (MPQ) (Melzack, 1975; Drewes et al., 1993) was used at baseline \((t0)\) and after the last treatment \((t4)\). Pain rating indices (PRI) of sensory (S), affective (A), miscellaneous (M), evaluating (E), and total (T) dimension of pain and the present pain indices (PPI), PPI worst, PPI least at baseline \((t0)\) and after the last treatment \((t4)\) were compared between groups.
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