

Hypnoanalgesia in Dentistry: a Literature Review

Keywords: Hypnosis, dentistry, pain, analgesia

Abstract

The purpose of this literature review was to evaluate the efficacy of hypnosis as a pain relieving method during and after the dental procedure. References focusing on pain and that could include anxiety and physiological parameters as evaluation criteria were taken into consideration. From the 15 studies who met inclusion criteria it was found that, when used as an individual therapy, hypnosis lead to an increase in patient's pain threshold. However, effectiveness was directly dependent on the degree of discomfort of the dental treatment performed, with low pain procedures having a higher success rate. When used as an adjunct to local anaesthesia, hypnosis reduces the amount of postoperative analgesic consumption, helps in patients' general comfort, and decreases anxiety levels.

Hypnoanalgesia in Dentistry: a Literature Review

Pain is a complex neurophysiological process that has been studied for centuries. In dentistry, the concept of “pain” is significant. In fact, despite the progress in anaesthesiology, fear of pain remains the principal obstacle for seeking dental treatment. Many will associate a visit to the dentist to pain, it is therefore essential that as professionals and healthcare providers, dentists learn to understand, evaluate and manage pain.

The International Association for Study of Pain (IASP) defines pain as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage” (Merskey & Bogduk, 1994). It can be classified as “acute” or “chronic”. Acute pain is transitory and has a recent onset. It is used as a protective mechanism towards aggressions and participates in maintaining an individual’s physical integrity. Acute pain is usually associated with anxiety (Marchand, 2009). Chronic pain is an unpleasant sensation lasting between three to six months. It does not play any role in the protection of the organism. On the contrary, chronic pain is harmful and is linked to depression (Boucher and Pionchon, 2006). It is important to understand that pain is a subjective experience that responds to a physical and/or psychological stimulus. This is clearly accentuated in Loeser’s conceptual model of pain (Marchand, 2009). At the centre of his diagram is nociception, which is the neural processing of a painful stimulus. As a response to nociception, individuals perceive the sensation of pain. It is a sensation that arises directly from the nociception. The interpretation of this negative experience is called suffering. This process is subjective, as each individual will cope with those sensations differently. This response is generated in higher nervous centres and is linked to the emotional aspect of the individual. Finally, Loeser describes actions, facial expressions and body language used to relay the sensation of pain as pain behaviour. There is a clear interaction between the sensory and emotional aspect of pain and this can explain how cognitive behavioral therapies could act on painful experiences (Vinckier & Vansteenkiste, 2003).

In fact, it is established that two main methods of treatments exist to relieve pain: pharmacological and non-pharmacological treatments. Pharmacological treatments are often

easier to access and better accepted in the general population and in the scientific community although their efficacy to fight against acute and chronic pain is often limited and their safety profile less than ideal. On the other side, non-drug interventions for pain relief can be classified into two types: counterirritants such as acupuncture, electrical stimulation, physiotherapy or auriculotherapy, and mindbody techniques such as cognitive-behavioral therapy, hypnosis, relaxation and psychotherapy. These practices activate endogenous pain control system and manage to induce not only specific effects but also nonspecific effects related to the patient-physician relationship or placebo effect (Coutaux, 2017).

In dentistry, local anaesthesia is considered to be the gold standard in pain relief (Malamed, 1994). However, it presents many disadvantages, including technique sensitivity, risks and side effects and its direct relation to dental phobia. In their study, Kaufman, Goharian and Katz (2000) observed that 26.2% of patients who were anesthetized during different dental procedures such as exodontias, restorations, root canal treatments or soft tissue periodontal surgeries, complained of dizziness, palpitation, diaphoresis and restlessness. Those are short term side effects. However, more serious complications such as needle breakage, nerve damage leading to numbness or paralysis and allergic reactions can also occur and cannot always be avoided. In order to address these issues, the development and implementation of mindbody techniques, such as relaxation and hypnosis could be beneficial to the patients. Those techniques offer several advantages such as reduced anxiety levels, long term stress management, coping method and they increase patient adaptability (Boucher & Pinchon, 2006). Additionally, post-hypnotic suggestions of analgesia given at the end of a session before awakening, could act as a replacement to analgesics, or at least lead to reduced consumption of medication (Abdeshashi et al., 2013).

Hypnosis has been used since ancient times and has thrived in the modern world during the Second World War. The availability of pharmaceutical resources being limited, surgeons had to employ alternative approaches to treat maxillofacial injuries. This is when hypnosis was on the upswing once again (Hunter, 2000). Dr Milton Erickson is considered to be one of the main contributors to modern hypnosis used both in medicine and dentistry. He

was the founder of the American Society of Clinical Hypnosis (A.S.C.H.) and has worked towards the recognition of hypnosis as a science in the medical community (Michaux, Halfon & Wood, 2007).

Associated with many misconceptions, hypnosis has been defined variously, and often simultaneously, as a state, trait, procedure, process or therapy (Sugarman LI, 2015). In 2014, the Society of Psychological Hypnosis, Division 30 of the American Psychological Association, developed a new definition for Hypnosis: “A state of consciousness involving focused attention and reduced peripheral awareness characterized by an enhanced capacity for response to suggestion.” (Elkins, Barabasz, Council & Spiegel, 2015). Its domain is composed of 3 levels that correspond to different aspects of hypnotic phenomena: responses to different types of hypnotic suggestions, varying patterns of response over the phases of a suggestion, and the impact of state and trait influences (Polito, Barnier, Woody & Connors, 2014).

Hypnosis can be classified into two main methods known as the “uncovering technique” and the “direct technique”. As it uncovers the origin of fear, the uncovering technique requires additional qualifications in psychology. The direct technique, based on the relaxation and reassurance of the patient through the use of suggestions, has a more symptomatic approach and can therefore be learned and used by dentists in the dental clinic (Ayer, 2011). This technique can further be sub-classified into a variety of methods including hypnotic-focused analgesia, self-hypnosis or rapid induction analgesia (Gillett & Coe, 1984; Wolf et al., 2016a). Hypnodontics, which is the use of hypnosis in dentistry, can aid in the management of the dental patient in several ways, including the reduction of fear and anxiety, the control of excessive salivation and gagging and the management of pain (Ayer, 2011).

Currently, hypnosis is mainly used in dentistry to decrease fear and anxiety that the patient might encounter when visiting the dentist, and to modify pediatric patient behaviour during dental treatment (Glaesmer, Geupel & Haak, 2015; Ramírez-Carrasco, Butrón-Téllez, Sanchez-Armass & Pierdant-Pérez, 2017). However, if proven effective in the management of pain, hypnosis could be used as a relatively accessible alternative to local anaesthesia and

analgesics. Additionally, patients allergic to local anaesthesia or medical conditions that preclude its use and the use of certain analgesics would have a viable replacement. The purpose of this literature review was to assess the effectiveness of hypnosis in relieving pain, both during and after dental procedures.

Method

A literature search was achieved on the databases PubMed and Google Scholar, using the following keywords: hypnosis, auto-suggestion, dentistry, dental, analgesia, pain, pain management, anaesthesia. On PubMed, the key words were arranged in the following manner: (hypnosis OR autosuggestion) AND (dental OR dentistry) AND (pain OR analgesia).

This literature review consists of case-control prospective studies and clinical trials written in English and in French that include all types of hypnotic techniques: with the intervention of a trained professional or by the intermediate of a pre-recorded audiotape. In the references chosen, hypnosis was either used alone or as an adjunct to local anaesthesia and happened either before or during the dental treatments. In the case-control studies, control groups could have been exposed to relaxation techniques, music, general anaesthesia, other treatment methods, or a different type of hypnosis than the case group. Only the studies including, but not limited to pain as an evaluation criterion were selected. Due to a lack of recent articles on the designated subject, no time restraint was applied and articles were chosen from 1977 to 2017.

Articles in other languages were ruled out as well as literature reviews, epidemiological studies, or case reports. References evaluating the effects of hypnosis on patients suffering from chronic pain or on non-dental related interventions were not taken into consideration. The following information was retrieved from the selected articles and organized into two result tables: author, year of publication, type of study, number and characteristics of the patients as well as the number of drop-outs/ exclusion, type of dental procedures performed, hypnotic technique used and whether effectiveness was tested during and/or after the dental procedure, scale used to measure the evaluation criteria and finally whether hypnosis was estimated effective or not. The inclusion of randomisation as a criterion

in the result table was representative of the quality of the study. Patients being randomly attributed to treatments, and therefore study groups, are an especially important factor, as it **strongly reduces patient's** characteristics bias (like hypnotic suggestibility) in the evaluation of the treatment efficacy.

Results

A literature search was performed applying the previously mentioned key words. One hundred and eighty-one references were found. Of the 181 references found, 110 presented an abstract and 97 were written either in French and English. Out of the 97 references, 33 clinical studies were pre-selected, based on the abstract, for further investigation of the articles. The implementation of the selection criteria led to the exclusion of 18 of those studies. Within those studies, 7 were excluded because they were related to chronic pain, such as temporomandibular pain or chronic orofacial pain. Four studies were case reports, therefore not taken into consideration. Studies only taking anxiety as an evaluation criterion, in this case four of them, were excluded. Finally, 3 studies were focused on non-dental related procedures and were therefore also excluded (Figure 1).

Description of selected studies

Fifteen studies were included gathering a total of 694 patients (Table 1). Fourteen of the fifteen studies were controlled clinical trials and one study was a cross over study (Wolf et al., 2016b). The number of participants varied from a minimum of 14 to a maximum of 102 patients. One study was related to children (Huet et al., 2011), while the other fourteen references were focused on adult participants. All the studies assembled participants that were classified as being in good health, without mental disturbances. Depending on the studies, two type of comparison were established: (a) hypnosis versus no other preoperative treatments or coadjuvant to other treatments (Barber & Mayer, 1977; Dyas, 2001; Eitner et al., 2010; Enqvist & Fisher, 1997; Ghoneim et al., 2000; Huet et al., 2011; Shriv & Tal, 1989; Wolf et al., 2016a), and (b) hypnosis versus other therapies including local anaesthesia (Abdeshahi et al., 2013; Attaran et al., 2012; Wolf et al., 2016b), conventional dental hypersensitivity

treatments (Eitner et al., 2010), other types of hypnotic techniques (Facco et al., 2011; Gillett & Coe, 1984) or relaxation (Houle, McGrath, Moran & Garrett, 1988).

In three studies, hypnosis was used as an adjunct to intravenous sedation and/or local anaesthesia, rather than being used alone as an independent therapy (Dyas, 2001; Ghoneim et al., 2000; Mackey, 2010). Four references used pre-recorded audiotape as the hypnotic induction technique for the study, while the rest of the references used a professional trained to perform hypnosis (Gillett & Coe, 1984; Enqvist & Fisher, 1997; Ghoneim et al., 2000; Mackey, 2010). Dental procedures performed varied depending on the studies: restorative treatments (Attaran et al., 2012; Eitner et al., 2010; Gillett & Coe, 1984; Huet et al., 2011), third molar surgical extraction (Abdeshahi et al., 2013; Dyas, 2001; Enqvist & Fisher, 1997; Ghoneim et al., 2000; Mackey, 2010), or dental pulp testing (Barber & Mayer, 1977; Facco et al., 2011; Houle, McGrath, Moran & Garrett, 1988; Sharav & Tal, 1989; Wolf et al., 2016a y b).

This review was focused on the effect of hypnosis on pain, thus the most frequent evaluation criterion present in the included references was pain. The evaluation of pain was founded on the use of a Visual Analogue Scale (VAS) (Abdeshashi et al., 2013; Eitner et al., 2010; Enqvist & Fisher, 1997; Ghoneim et al., 2000; Houle, McGrath, Moran & Garrett, 1988; Huet et al., 2011; Mackey, 2010; Sharav & Tal, 1989; Wolf et al., 2016a y b), the amount of anaesthetic necessary during the procedure (Gillett & Coe, 1984; Mackey, 2010), the amount of postoperative analgesics consumption (Dyas, 2001; Enqvist & Fisher, 1997; Ghoneim et al., 2000; Mackey, 2010) and pain threshold evaluation (Barber & Mayer; 1977; Facco et al., 2011; Houle, McGrath, Moran & Garrett, 1988; Sharav & Tal; 1989; Wolf et al., 2016a y b). Physiological parameters (blood pressure and heart rate) were also obtained (Dyas, 2001; Ghoneim et al., 2000; Mackey, 2010). In one study, nausea and post-surgical complications were also monitored (Ghoneim et al., 2000) and one study did an EMG recording of the masseter muscle (Sharav & Tal, 1989). Other psychological scales are taken into consideration to evaluate anxiety (Huet et al., 2011; Ghoneim et al., 2000), patient's behaviour (Huet et al., 2011) and opinions on the procedure (Gillett & Coe, 1984).

Hypnosis and the time of pain evaluation also varied depending on the studies. Thus, hypnosis was performed before and/or during the treatment procedure. Likewise, the evaluation of criteria was performed after the hypnotic procedure but before dental care, or during the administration of local anaesthesia or after the dental related procedure (Table 1).

The randomization was not clearly stated for only three studies (Dyas, 2001; Gillett & Coe, 1984; Sharav & Tal, 1989), therefore increasing the risk of bias in those references.

Evaluation of the effect of hypnosis

Hypnosis versus no treatment or coadjutant to other treatments

The selected studies compared the effect of hypnosis to a control group receiving no treatment or simple music broadcasting. All eight references were implemented on non-phobic patients. They brought significant results in favour of hypnosis concerning pain management, but also anxiety and physiological parameters.

In three studies, the efficacy of hypnosis on pain management was tested by measuring dental pulp stimulation in one group under hypnosis and in another control group that received no pre-experiment treatment. It was noted, in all three references, that pain threshold was significantly increased in the group that received hypnosis, thus demonstrating an increased tolerance to pain in this group (Barber & Mayer, 1977; Sharav & Tal, 1989; Wolf et al., 2016a). Sharav and Tal (1989) observed that the perception of sensations declined from 94.3% before hypnosis to 14.1% after hypnosis, and that pain dropped from 100% to 28%. When their opinion was recorded, subjects generally rated experiment as less painful when under hypnosis (Wolf et al., 2016a; Sharav & Tal, 1989). Wolf et al. (2016a) showed a VAS score of 7.1 without hypnosis compared to 4.0 with hypnosis. Complete anaesthesia was achieved if complete absence of pain was reported even at maximum stimulation. The results on this matter differ depending on the studies. Barber and Mayer (1977) found that all the subjects presented complete anaesthesia. Similarly, Sharav and Tal (1989) discovered that 6 out of 8 patients did not feel pain at maximum stimulation and that the remaining two patients did not feel pain but rather perceived a “sensation”. On the contrary, Wolf et al. (2016a)

recorded that only 6 out of 37 subjects reported full anaesthesia, therefore judging hypnosis safe only when used as an adjunct to local anaesthesia.

In four case-control studies, the effectiveness of hypnosis was tested when used as an adjunct to local anaesthesia during surgical removal of third molars. All patients were under intravenous sedation, received local anaesthesia and had one or more of their wisdom teeth extracted. The case groups were presented with hypnosis, while the control groups did not receive any pre-surgery therapy (Dyas, 2001; Enqvist & Fisher, 1997; Ghoneim et al., 2000; Mackey, 2010). Hypnosis was judged effective as an adjunct to local anaesthesia in three studies, in statistically significantly reducing the amount of anaesthetic reinforcement needed during the procedure (Dyas, 2001; Mackey, 2010) and the number of analgesics consumption post-surgery (Enqvist & Fisher, 1997; Mackey, 2010).

In Dyas' study, patients in the hypno-sedation group required less intravenous fentanyl (0.8 mg/kg bodyweight) than subjects in the control group (0.92 mg/kg bodyweight) $p < 0.05$ and, although not in a significant manner ($p > 0.05$), the amount of sedative agents needed during the surgery was also lower in the hypnosis group (0.131 mg/kg bodyweight of midazolam in the hypno-sedation group versus 0.139 mg/kg bodyweight in the control group). Mackey (2010) observed a decreased intraoperative Propofol usage and a decreased amount of postoperative narcotic consumption in the control group, $p < 0.01$ and, in the five days following the surgery, Enqvist and Fischer (1997) found that 28% in the non-hypnosis group consumed three or more analgesics, while only 3% in the hypnosis group consumed three doses of more. Dyas (2001) also observed that the recovery time was statistically significantly quicker when hypnosis was used (32 minutes in the hypno-sedation group compared to 50 minutes in the control group, $p < 0.001$).

Ghoneim et al. (2000), on the other hand, demonstrated that there were no significant differences between the case and control groups in the postoperative pain levels and analgesics consumption ($p = 0.87$ for Ibuprofen number of tablets and $p = 9$ for Vocidin). It is interesting to note that there was an increase in vomiting in the hypnosis group (1.28 vomiting episodes) compared to the control group (0.27), $p = 0.006$.

Some references also recorded the anxiety level of the subjects before and during the procedures. Enqvist and Fischer (1997) noted that the preoperative anxiety levels in the hypnosis group was stable, compared to an augmentation of stress levels in the control group. However, it is important to keep in mind that the anxiety levels were not equivalent at baseline between the two groups, with less anxious patients in the hypnosis group. Ghonheim et al. (2000) observed that although all patients suffered a rise in their anxiety levels from the screening to the immediate preoperative sessions, those in the hypnosis group were less anxious than those in the control group. This was measured using the Spielberger's State-Trait Anxiety Inventory (STAI), and results were found to be statistically significant ($p=0.03$).

In those studies, subjects from the hypnosis group were given a pre-recorded tape that they had to listen to everyday for one week before the surgery. Correspondingly, hypnosis carried out before the administration of local anaesthesia significantly reduced stress levels in children compared to a group without hypnosis (Huet et al., 2011) (Table 2).

Hypnosis versus other treatment

When compared to local anaesthesia, results differ depending on the studies. Wolf et al. (2016b) performed dental pulp stimulation with either hypnosis or local anaesthesia, using a computer driven injector in a prospective randomized cross over study. Results found were not in favour of hypnosis. When subjects were under hypnosis, their pain tolerance was significantly lower than when they were injected with local anaesthesia, as shown by lower pain threshold when under hypnosis. The mean values of the pain threshold for hypnosis were 58.3 compared to 79.4 with local anaesthesia. Complete anaesthesia was achieved in only 6 patients (18%) compared to 33 under local anaesthesia. VAS scores and general opinion on the hypnosis procedures demonstrated that patients felt more comfortable when receiving local anaesthesia (Wolf et al., 2016b).

On the other hand, two studies found that hypnosis was, in some cases, as effective as or even more effective than local anaesthesia (Abdeshahi et al., 2013; Attaran et al., 2012). In their study, Attaran et al. (2012) observed that 76.2% of patients that received hypnosis

before an endodontic treatment reached suitable deep numbness without the use of local anaesthesia. Patients who got two of their third molars extracted, one under local anaesthesia and one under hypnosis with a two weeks wash out period, felt less pain during and after the procedure when they received hypnosis. Their consumption of analgesics post-surgery was also statistically significantly lower when hypnosis was used instead of local anaesthesia (Abdeshahi et al., 2013).

When compared to conventional dentin hypersensitivity treatments, hypnosis was found as effective as fluoride application and desensitizing agents at reducing pain (Eitner et al., 2010). Facco et al. (2011) demonstrated that hypnotic focused analgesia (HFA) provided a stronger analgesia than simple hypnosis. When HFA was used, 45.2% of subjects achieved full analgesia, compared to 16.1% with hypnosis alone. Rapid induction analgesia (RIA) and a shortened version of it (SI) were compared in another study (Gillett & Coe, 1984). Both were found to be equally effective in inducing hypnotic analgesia. However, the effectiveness of those methods to relieve pain was directly correlated with the degree of discomfort of the procedure. The higher the discomfort, the more likely the subjects were to require more anaesthesia during the procedure.

Discussion

The aim of this review was to evaluate the efficacy of hypnosis in the management of pain during and after the dental procedure. This review demonstrates that hypnosis is a powerful analgesic tool that could help manage patients' anxiety and general behaviour when used as an adjunct to local anaesthesia or when compared to no other preoperative treatments. However, when compared to local anaesthesia, results are more heterogeneous, making it difficult to draw a definite conclusion.

When pulp testing was used to evaluate the effectiveness of hypnosis as an intraoperative pain relieving method, it was found that, although hypnotic suggestions did increase the subjects' tolerance to pain, complete anaesthesia was not always achieved. Variability in the results between studies is representative of the patient dependent characteristic of hypnosis. In fact, Goddfredson (1973) found in his study that there is a

strong correlation between hypnotisability and an individual's capability to reach hypnotic analgesia. In fact, he discovered that 75% of highly suggestible subjects were able to go through the entire dental procedure using hypnotic analgesia only, compared to 38% of patients who fall in the low suggestibility range. Of all the studies considered in the present literature review only one reference took hypnotic suggestibility of the subjects into account by selecting highly receptive patients (Sharav & Tal, 1989). By doing so, the author of this study investigated the efficacy of hypnosis in a specific group of individuals of high hypnotic suggestibility. It is understandable that for the purpose of quality and plausibility of their studies, other authors favored randomization of the subjects regardless of their suggestibility, as this facilitates the application of the established results to the general population.

In a clinical setting, dentists should take patient's hypnotisability into consideration, especially when a successful response to difficult cognitive suggestions is expected, such as to experience analgesia. Scales to measure hypnotic ability have been developed in the United States since 1930s, allowing researchers to identify three different hypnotic phenomena: challenge suggestions, ideomotor responses and cognitive alterations. But although these standardized scales are useful in predicting which type of hypnotic suggestion individuals will most likely experience, they cannot prognosticate their hypnotic potentials for hypnotizability assessment (Fink, 2007). For the purpose of clinical replication, the hypnotic procedures were standardized in all the studies. However, it is evident that to increase an individual's compliance to hypnosis, clinicians should prefer individually tailored hypnotic suggestions that will allow adaptation to the individual's hypnotisability.

This raises yet another question: will hypnosis work on patients regardless of their age? Only one study in this literature review was conducted on children, and most studies had a patient's selection of an average age of 30 years old. We can assume that suggestibility and age are connected as children have a broader imagination than elderly patients. Studies evaluating the correlation between hypnosis effectiveness and patient's age could be useful in aiding professionals in their decision in the use of hypnosis as part of their treatment plan. Moreover, pulp testing is not representative of all possible dental procedures. It is not certain

that the results found in those studies would be applicable to all dental procedures. Those studies do not demonstrate in which situations hypnosis would be effective. Will it be effective only for minor procedures or does that include more invasive procedures like extractions or implants? Gillet and Coe (1984) found that when used alone, hypnotic analgesia was more prone to be successful when patients were subjected to low pain dental procedures such as root canal treatments in non-vital teeth or a single restoration. Hypnosis seems to be the most effective in reducing intraoperative pain when used as an aid to local anaesthesia. In fact, all the studies evaluating pain abatement when hypnosis is used in conjunction to local anesthesia show positive results in favor of hypnosis.

Concerning the effects of hypnosis post procedure, only a few studies are available up to this day that evaluate its efficacy in dentistry. The addition of post hypnotic suggestions has shown to decrease postoperative recovery time as well as pain perception and consumption of analgesics (Abdeshahi, 2013; Enqvist & Fischer, 1997; Mackey, 2010). This is in accordance with King et al. (2001) systematic review concerning the use of hypnosis in pain management. This review regrouped a total of 38 studies assessing the effectiveness of hypnosis in relieving chronic pain, as well as pain and discomfort after a surgical procedure, and it investigates the difference between hypnosis, placebo and relaxation. The evaluation of the analgesic potential of hypnosis after surgical procedures was based on the review of three studies comparing hypnosis versus no preoperative treatment for two studies and hypnosis versus emotional support for one study. The treatments performed were non-dental related. They included radiological procedures, plastic surgery and orthopaedic hand surgery. The results of this review indicated that hypnosis was always far superior in providing increased postoperative healing and in lessening the need for analgesics. King et al. (2001) therefore concluded that hypnosis used as an adjunct to pharmacological means of pain alleviation could eventually lead to reduced consumption of medication. The present review concurs with this assertion, as all the studies evaluating postoperative analgesic consumption were in favour of hypnosis. Patients who were subjected to hypnosis before the dental surgical procedure consumed significantly less analgesic medication than patients in control groups.

In this literature review, studies selected used a variety of hypnotic techniques, including recorded audiotape or hypnosis performed by the dentist, self-hypnosis, hypnotic induced analgesia and rapid induction analgesia. The amount of time that hypnosis was used for also varies, ranging from one week with the audiotape to one session on the day of the procedure when performed face to face. Those factors might influence the success rate of the studies and make comparison of the results challenging. In some studies, whether hypnosis had a suggestion for local anaesthesia or was used simply as a mean to decrease patient's anxiety levels was not clearly stated. Facco et al. (2011) suggests that hypnotic focused analgesia would be the best technique in inducing hypnotic analgesia and that therefore all hypnotic protocol should add HFA rather than using hypnosis alone. It is interesting to note that self-hypnosis, which is a form of hypnosis achieved by self-induction or by listening to a pre-recorded audiotape, could help patients cope with pain without the intervention of a clinician or as an aid to medication. However, as previously mentioned, hypnosis is dependent on patient's suggestibility and will work more or less accordingly. Highly suggestible patients will receive the most benefits. Nevertheless, hypnosis could be useful in less suggestible patients if, as an alternative to complete ablation of sensation, alteration of the unpleasantness of pain is suggested, leading to an increase in pain tolerance.

Conclusions

We cannot conclude that hypnosis used alone as an individual treatment is effective in the complete ablation of pain sensation. However, hypnosis was found to allay phobia and anxiety and produces relaxation, which could help in the reduction of pain, as pain has an important emotional component. The literature supports that when used as an adjunct to local anaesthesia and analgesics, hypnosis facilitates the induction of their anaesthetics effect, eventually leading to a reduced amount of both pharmacological means consumption. Although hypnotic suggestion might not work for every patient, it can be used as a supplementary method for the management of pain and enhances traditional means of pain alleviation.

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