THE USE OF HYPNOSIS IN DENTAL CARE – A LITERATURE REVIEW

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Palavras-chave: Hipnose. Odontologia. Assistência Odontológica. Assistência Ambulatorial. Hipnose em Odontologia.

RESUMO

Introdução: A hipnose é uma técnica que envolve a indução de um estado especial de consciência em que a mente consciente relaxa enquanto a mente inconsciente se manifesta trabalhando a imaginação. **Objetivo**: Realizar uma revisão de literatura para avaliar as diferentes técnicas utilizadas para induzir a hipnose e a necessidade de seu uso no atendimento odontológico, bem como, seus resultados. **Fontes de dados**: Uma pesquisa bibliográfica foi realizada nas bases de dados Google Acadêmico e PubMed para identificar estudos para revisão. Não houve restrição de idioma ou ano. Os critérios de inclusão foram os estudos que abordaram o tema de interesse. **Síntese dos dados:** A hipnose visa melhorar o atendimento, controlando a ansiedade, o medo e as fobias dos pacientes. Entretanto, seu uso é pouco conhecido pelos pacientes e profissionais no contexto do tratamento odontológico. Existem duas técnicas de hipnose, a saber, hipnose essencial e hipnose por fixação objetal. As principais indicações são a necessidade de controlar o medo e a ansiedade do paciente durante o tratamento odontológico e preparar os pacientes antes de realizar procedimentos cirúrgicos. Pode ser usado em associação com anestésicos locais, mas essa combinação não é essencial. **Conclusão**: A hipnose pode ser eficaz no controle dos sentimentos dos pacientes relacionados ao atendimento odontológico, sendo a hipnose pela fixação do objeto a técnica mais utilizada para esse fim. É considerado fácil, rápido, indolor, com baixos custos e acessível a qualquer dentista que tenha completado o treinamento específico neste campo.

Keywords: Hypnosis. Dentistry. Dental Care. Ambulatory Care. Hypnosis. Dental.

ABSTRACT

Introduction: Hypnosis is a technique that involves inducing a special state of consciousness in which the conscious mind relaxes while the unconscious mind manifests itself by working the imagination. **Objective**: To perform a literature review to evaluate the different techniques used to induce hypnosis and the need for its use in dental care, as well as, its results. **Sources of data:** A bibliographic search was performed in the Google Academic and PubMed databases to identify studies for review. There was no restriction on language or year. Inclusion criteria were studies that addressed the topic of interest. **Synthesis of data**: Hypnosis aims to improve care by controlling patients' anxiety, fear and phobias. However, its use is little known by patients and professionals in the context of dental treatment. There are two techniques of hypnosis, namely essential hypnosis and hypnosis by object fixation. The main indications are the need to control the patient's fear and anxiety during dental treatment and to prepare the patients before performing surgical procedures. It can be used in association with local anesthetics, but this combination is not essential. **Conclusion**: Hypnosis can be effective at controlling patients' feelings related to dental care, being the hypnosis by object fixation the most used technique with this purpose. It is considered easy, quick, painless, with low costs and accessible to any dentist who has completed specific training in this field.

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INTRODUCTION

The aim of dentistry is to restore and maintain oral health, often using highly technologically developed techniques. However, the oral health of the Brazilian population is still considered bad, with dental caries being the most common and debilitating diseases affecting the oral cavity.[1] Although the DMFT index in Brazil has been one of the world's highest, the prevalence of dental caries has been declining since 1970, thanks to investment in oral health, which has expanded access to public dental services, especially for the poorest population.[2,3] Despite this advance in dentistry, there are still many people who do not seek or cannot access dental care.[1]

There are three main factors that might explain why the Brazilian oral health situation remains precarious: the socioeconomic conditions of the population, making it difficult to access the places of care because of high costs; the lack of information on oral hygiene; and the fear and/or phobia of going to the dentist.[1] This problem in oral health does not present as a threat to life initially, but directly affects the quality of life, with an impact on aesthetics and chewing, besides causing pain and discomfort and functional and social limitations.[4,5]

During the dental treatment of children, the dentist uses techniques related to behavioural control, and when these techniques are not effective, there are other methods that can be used to help improve care.[6] Despite the fact that many adults are afraid of dental care, the use of such techniques during their treatment is not common. Some methods that could be used for both adults and children with fears or phobias would be the use of drugs to control anxiety, conscious sedation with nitrous oxide or hospital care under general anaesthesia. There are also less widely used but more accessible and less invasive methods, such as acupuncture and hypnosis.[7]

The definition of hypnosis has undergone several modifications over the years. It was the American psychiatrist Milton Erickson who carried out new studies and defined hypnosis as it is known nowadays, i.e. as being a special state of consciousness. According to the Federal Council of Dentistry (FCD) in 2008, hypnosis can be performed by any qualified dentist, after completing a certified training course.[8,9]

In view of the above, the objective of the present study was to perform a literature review on the use of hypnosis as an aid to dental care, focusing mainly on its different techniques and its main indications and results.

MATERIALS AND METHODS

Study design

To conduct the literature review, a bibliographic search was performed in the Google Academic and in MEDLINE, via PubMed, databases. The descriptors "Hypnosis", "Dentistry", "Hypnosis Dental", "Dental Care", "Ambulatory Care" and "Treatment" were used with the Boolean operators "AND" and "OR". The search strategy used in MEDLINE (via PubMed) was: ((((Hypnosis OR Hypnosis Dental)) AND (Dentistry OR Dental Care))) AND (Ambulatory Care OR Treatment).

There was no restriction on language or year. Inclusion criteria were clinical investigations or literature reviews that addressed the use of hypnosis in dentistry, showing their main indications, the techniques used and/or the principal results. Studies that did not mention the techniques of hypnosis used as an aid in dental treatment, or those that did not report their indications or results, were excluded.

Synthesis of data

History

Hypnosis was first performed in the 18th century by the Viennese physician Franz Anton Mesmer, who coined the term Animal Magnetism or Mesmerism. The idea of Mesmerism was that animate organisms were subject to magnetic influences. Mesmer performed experiments in which he placed magnets next to his own body, requiring only contact with his hand for the therapeutic effect to be achieved.[8,10]

With the abandonment of Mesmerism, James Braid proposed, in 1841, a new technique, called Hypnosis, also known as Braidism or Neurohypnotism. This involved making a person enter into a trance through nervous system fatigue, usually by fixation on an object. Braid's technique does not depend on magnetism, but on the patient's physical and psychic state. When hypnosis occurs, the responsibility is deposited in the professional, who takes control of the patient's body, allowing the elimination of symptoms and the control of the behaviour.[8,10]

Sigmund Freud (1856–1939), a famous Viennese physician who is considered the "Father of Psychoanalysis", became interested in hypnosis, together with Charcot, with the aim of finding a physiological explanation of suggestion in the nervous system. However, Freud later abandoned hypnosis and set out for free association. With the emergence of psychoanalysis, hypnosis declined in popularity.[8,10] However, in the 20th century, the American psychiatrist Milton Erickson resumed his studies on the technique, his style being known as Ericksonian Hypnosis.[8]

In 1966, the Brazilian president Castelo Branco extended the practice of hypnosis to dentists, through article

6, items I and VI of law number 5081, which came into force in August of that year. Before being allowed to practice hypnosis, dental professionals need to obtain a certificate issued by the FCD after attending a course coordinated by a dentist qualified in the practice of hypnosis by the FCD, and to carry out a minimum of 180 hours theoretical and practical training, in addition to other requirements.[8,9]

Hypnosis has been practiced for years and has undergone various changes, both in its concept and practice. In scientific terms, hypnosis consists of a special state of consciousness, where the conscious mind, the left side of the brain, relaxes, allowing induction, while the unconscious mind, the right side of the brain, manifests itself, working the imagination. The dentist manages to reach the patient in this hypnotic state, usually using a monotonous and repetitive voice, in a quiet and calm environment.[11]

The physiological processes that allow the body under hypnosis to dispel pain have been studied. The most recent theory is that which considers exteroceptors (pain receptors) and the ascending reticular activating system (ARAS), which are bundles of cells close to the brain. When a person knows that he is going to undergo some painful process, he begins to release mainly cortisol, a hormone that produces stress and ends up depleting the brain. The hypnosis technique causes ARAS to induce the production of serotonin (well-being hormone) and beta-endorphins, creating an antagonism with cortisol. Recent studies using computed tomography have shown that the ARAS image changes from a state of pain to well-being when the patient is hypnotized.[11]

Patients with a history of psychosis who have a poorly established reality, children under 4 years old and elderly people, especially those with low intellectual activity, are contraindicated for hypnosis.[11] In these and other cases, the patient may be given medications to control anxiety prior to dental care. Benzodiazepines are the most commonly used oral tranquilizer drugs. In addition, there are reports of the use of *Valeriana officinalis*, which, unlike benzodiazepines, is practically free of side effects[12]. In addition to medications, the professional can use inhaled sedation with nitrous oxide.[13]

Main indications

Hypnotic practice provides techniques and methods that increase therapeutic efficacy in all dental specialties, requiring no resources such as drugs or complex instruments, and can be used in the clinical environment.[9]

The practice of hypnosis has several indications in dental care, the main one being to reassure the patient who is fearful or anxious about the treatment, thus facilitating the professional's work.[14]

In dentistry, in addition to being used as a substitute or adjuvant for local anaesthesia[19], hypnosis may be indicated for:

- Treating and/or controlling anxieties, fears and phobias related to dental procedures;
- Conditioning the patient for the adoption of hygiene habits, adaptation to the treatment and to the use of medicines, reeducation of food intake habits and the control of parafunctional habits;
- Preparing patients for surgery, helping to improve the patient's psychological condition;
- Adapting and motivating behaviours directed towards the dental treatment[9].

Techniques

Two classical techniques of hypnosis, called essential hypnosis and hypnosis by object fixation, have been studied. The first involves taking the patient through five degrees of trance: hypnoidal, light, medium, deep and somnambulic (Table 1). The second technique, called object-fixation hypnosis, involves asking the patient to stare at any point in the room or an object placed about 25 cm from his face. Then, the professional makes suggestions in a repetitive and monotonous way regarding muscle relaxation, weight on the eyelids and tearing. In response, the patient tends to close his eyes, so the hypnotist orders the patient to sleep. Then,

***Table 1**: Degrees of trance in Essential Hypnosis and its characteristics*

Degrees of Trance	Characteristics
HYPNOIDAL	Fatigue of the eyelids; apparent drowsiness; eye closure; deep mental relaxation; heavy limbs.
LIGHT	Complete physical relaxation; limb movement challenging.
MEDIUM	Involuntary automatic movement; partial amnesia; superficial anaesthesia (may stop feeling pain); selective deafness.
DEEP	Complete amnesia and anaesthesia; visual and auditory hallucinations; able to open eyes and talk while in the trance.
SOMNAMBULIC	Loss of the senses; sleepwalking; hallucinations.

Source: MARTINS, BATISTA, 2002[14]

the hypnotized individual will present similar characteristics to those hypnotized using the first technique, such as anesthesia and amnesia, among others.[14] Both are efficient, possessing several similarities and a few differences, with the methodology used to hypnotize being verbal, repeated and monotonous suggestion in both cases.[8]

Hypnotic technique can be suffered some modifications for young patients. Hypnorelaxation can include induction, deepening, special place/garden imagery and awakening. Stories or adventures, also can used, with individually tailored and elaborated with direct, indirect and ego strengthening suggestions to create absorbing and pleasant experiences.[15-18]

All techniques are similarity between them is the role of the professional, who first offers suggestions to the patient and, later, gives orders. This gradual sequence is of paramount importance to the success of hypnotic practice.[14]

The practice of hypnosis is efficient, regardless of the technique used, has several indications, and can be performed by any qualified dentist.[9,14] However, not all patients are eligible to receive hypnosis, as patients with mental impairment, the elderly or children under 4 years of age and patients undergoing psychiatric treatment.[11] In these situations, it is possible to use oral drugs such as benzodiazepines and *Valeriana officinalis.*[12]

Despite the effectiveness of using benzodiazepines for anxiety control, they have more contraindications than hypnosis. Diazepam (a representative of the benzodiazepines most commonly used in dentistry) has been indicated as a causative factor of cleft lip and cleft palate, so its use is contraindicated in pregnant women. It should also not be used in patients with sleep apnea, severe respiratory failure, children with physical or mental impairment, and people dependent on other central nervous system depressant drugs.[12]

Valeriana officinalis is a plant that produces a compound that is effective against anxiety and mild imbalances of the nervous system and, unlike benzodiazepines, has practically no known contraindications or harmful consequences. However, scientific research on its clinical use is scarce, and data on its use as an adjuvant to dental treatment is practically nonexistent.[12]

In addition to oral medications, conscious inhalation sedation with nitrous oxide and oxygen, which was first used for medicinal purposes in 1844, is another option. Its use is also effective in controlling the behaviour of odontophobic patients, since it has an anxiolytic, relaxing and slightly analgesic effect. This practice is extremely safe and has few contraindications. However, it is a technique that is underutilized in Brazil by dentists.[13,20] It can be used alongside hypnosis, with relaxation achieved through verbal suggestion, which will facilitate subsequent inhalation conscious sedation,[11] a combination of great clinical utility.[22]

Compare with other control techniques, hypnosis does not require any specific equipment, unlike conscious inhalation sedation with nitrous oxide and oxygen, which requires the use of relatively large and expensive equipment.[20] Also, a systematic review showed the benefits of non-pharmacological interventions on reducing mental distress were demonstrated with largest effects being shown for hypnosis. However, further high quality trials are needed to strengthen the promising evidence.[23]

CONCLUSION

The use of hypnosis in dental care has great value, since it allows patients who are fearful, phobic or anxious about the treatment to be treated better and more effectively, while also facilitating the dentist's work. In addition, it is considered an easy, painless, inexpensive technique that any professional who has undertaken appropriate training can use.

The hypnosis by object fixation the most used technique, however it is still surrounded by many myths, which hampers its use. In view of this situation, more studies are needed to confirm the efficacy of technique in order to reduce people's fear.

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