

The Effectiveness of Clinical Hypnosis in the Digestive Endoscopy: A Multiple Case Report

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Abstract

The aim of this study is to evaluate the efficacy and viability of hypnosis before and during a gastrointestinal endoscopy. Six Gastroscopies and 22 colonoscopies were carried out under hypnosis in a group of patients. The patients ranged in age from 20 and 67 years and have a history of previously incomplete and poorly tolerated examinations or expressed an active demand for sedation. For 6 of the patients who underwent a gastroscopy under hypnosis, the procedure was successfully completed, reaching the second part of the duodenum without difficulty for the endoscopist. Colonoscopy of the cecum was completed in 19 of 20 patients. All patients, except 1, considered their tolerance level as «good.» Hypnosis facilitated an adequate endoscopy intervention without any discomfort in 85% of the cases examined. Avoidance of anaesthesia reduces risk to the patient. Hence, hypnosis for gastrointestinal endoscopy appears to provide a promising strategy.

Keywords: Digestive endoscopy, gastrointestinal endoscopy, colonoscopy, anxiety, anaesthesia, hypnosis, relaxation technique.

In Spain, as in other countries, it is not a common practice to administer anaesthesia to patients that will undergo gastrointestinal endoscopy. This therapy is used as a means to reduce the observation time for the procedure (Mokhashi & Hawes, 1998). Additionally, besides the increase in the cost of endoscopic procedures, intravenous anaesthesia has other inconveniences such as a mortality rate of approximately 0.3 for every 1,000 explorations and can be contraindicated in some circumstances. For these reasons it is not unusual that endoscopists have investigated the use of alternative methods which, without compromising the quality of the exploration, increases the level of comfort for patients.

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Some previously employed strategies include allowing the presence of companion (Lachter, Wiseman, & Lavee, 1996), audio-visual distraction (Bampton & Draper, 1997), the use of clinical hypnosis, acupuncture (Cahn, Carayron, Hill, & Flamant, 1978), and the administration of nitric oxide (N₂O) (Trojan, Saunders, Woloshynowiyeh, Debisnky, & Williams, 1997). Hypnosis has been utilized as a means of sedation in both gastroscopies and colonoscopies with favorable results, especially in those patients susceptible to entering into a hypnotic state (Jackson & Middleton, 1978; Elkins et al, 2006). In other studies, relaxation techniques, or the use of suggestion directed towards reducing discomfort (Zimmerman, 1998), has been partially effective.

The objective of this multiple case report is to evaluate the effectiveness and viability of hypnosis before a gastrointestinal endoscopy, in a group of patients with a history of previously incomplete, poorly tolerated explorations, or with an active demand for sedation. Hypnosis was used without any previous selection of the hypnotic suggestibility of the patients. Some authors have said that there are between 15 to 25 percent of patients who cannot be hypnotized (Morgan, Johnson, & Hilgard, 1974). However, in our experience, virtually all patients have a reasonable capacity for experiencing hypnosis that it is a worthwhile tool for easing anxiety and discomfort. Perhaps this is because the hypnotic state is “natural” like sleep or “wakefulness” and can be activated spontaneously or by hypnotic induction.

Materials and Methods

Under hypnosis 6 gastroscopies (3 men and 3 women) and 22 colonoscopies were carried out on 19 patients (11 men and 8 women) ages ranging between 20 and 67 years. The 6 patients, on whom a gastroscopy was performed, were selected because they had undergone a previous exploration without sedation. However they did not complete the procedure because of intolerance. The intolerance was either due to a sensation of asphyxiation or to uncontrollable nausea. Of the 19 patients who underwent a colonoscopy, 10 who were undergoing their first procedure, requested sedation and accepted hypnosis. The 7 other patients who had previously undergone a complete colonoscopy and actively had demanded some form of analgesic, also accepted hypnosis. In the 2 remaining patients the previous explorations, were prematurely terminated due to intolerance. However they accepted participating in a new endoscopic procedure under hypnosis.

A single endoscopist (M.D., PhD.) performed all of the endoscopies. The same equipment was used for the procedures done with and without hypnosis and all of the patients gave informed consent. A single clinical hypnotist (M.D., PhD.) performed all of the hypnosis and none of the patients have had any posthypnotic complications. The patients were monitored in a follow up for more than a year after their procedure.

The endoscopies were performed using a series 300 Fujinon videoendoscopy. The gastroscopies were performed using an EG310HR with a maximum exterior diameter of 9 mm and the colonoscopies were performed using an EC300HM with an exterior diameter of 12 mm and a length of 140cm. All of the procedures were performed in a dim examination room. The clinical hypnotist was present during the entire procedure and no attempt was made to determine the hypnotic suggestibility of the patients prior to the endoscopies. A post-procedure questionnaire completed by all patients and the endoscopist served to quantify the degree of pain, recorded as none, mild, moderate and severe.

All of the patients received hypnotic training, provided by a physician (M.D., PhD.) trained in hypnosis, in at least two 45 minute sessions, before the exploration was done. In the first session, before the exploration was done, the fundamentals of both endoscopy and

hypnosis were explained. Following the explanations, hypnosis aimed at achieving a comfortable situation was then administered. Patients were told the anaesthetic effects that could be reached under hypnosis could be used for either gastroscopy or colonoscopy.

Those who were to have a repeated gastroscopy were given hypnotic suggestions directed towards diminishing the sensitivity to nausea induced by contact with the pharynx. A post-hypnotic suggestion was used to reduce the gag reflex. This was subsequently verified by demonstrating the absence of the gag reflex in spite of the presence of vigorous tactile stimulation of the posterior pharyngeal wall.

A sensation of epidural anaesthesia was induced in the patients who had to undergo a colonoscopy. By using hypnotic suggestions directed to provoke a paraparesia and infradiaphragmatic hypoesthesia, we were able to associate suggestions directed towards causing a state of tranquillity and well-being. The stimuli that was to trigger these experiences was the introduction of the colonoscope and the accompanying perineal sensation.

The second session was intended to reinforce the suggestions that were included in the previous preparations for the hypnosis and endoscopy. On the day of the procedural exploration, in the adjoining room, the hypnotic suggestion was reinforced by the clinical hypnotist 5 minutes prior to the exploration.

At the end of the procedures and before being released, the patients received hypnotic suggestions directed towards reinforcing the sensation of well-being and amnesia of the event. All of the patients were given a new set post-hypnotic suggestions for sedative type experiential effects during these 5 minutes, and were excused from the endoscopy unit without subsequent restrictions of activity.

Results

For the 6 patients who underwent a gastroscopy under hypnosis the procedure was successfully completed, reaching up to the second part of the duodenum without any difficulty for the endoscopist. Of these 5 patients the procedure was completed with good tolerance as reported by both the patient and endoscopist. For the remaining patient the tolerance level was evaluated as acceptable. In 5 patients, relevant organic pathology was discovered, namely hiatal hernia (2 cases), esophageal varices, active chronic gastritis, and recurrent neoplasia in an anastomotic site from a prior resection. In the remaining patient, the gastroscopy did not discover any significant findings. Colonoscopy to the cecum was completed in 19 of 20 patients (95%). In the remaining case, colonoscopy was stopped at the transverse colon due to the appearance of severe intestinal inflammation from Crohn Disease with the risk of complication if the endoscopy were to continue (Cotton & Williams, 1996).

In 10 cases it was necessary for the patients to change position during the exploration to facilitate access to, and checking of, the cecum. The patients actively cooperating without any alteration to their tolerance level. In two explorations a limited colonoscopy to the descending colon was planned and was considered sufficient once it had been carried out up to the splenic angle.

The endoscopic diagnoses are reported in Table 1. Organic pathology was found in 68.2% (15 of 22). In five of the explorations the tolerance to the procedure was sufficient to allow the addition of therapeutic procedures (polypectomy, electrofulguration angiodysplasia, etc). In 20 of the colonoscopies, the tolerance level was considered good (90.9 %) and acceptable by the endoscopist. In the two remaining patients (9.1%) short episodes of moderate abdominal pain during the colonoscopy was the only patient related complaint.

Table 1: Endoscopic Diagnoses

Final diagnosis after endoscopy	Patients
Post-surgical colon	2
Inflammatory bowel disorder	7
Colonic polyps	4
Cancer	1
Diverticulosis-Diverticulitis	5
Angiodysplasias	1
Normal	6

All of the patients, except for one, considered their tolerance level good (95.4%) including the two patients whom the endoscopist considered to have moderate discomfort during the endoscopy. A sole patient who had previously undergone various endoscopies, with and without sedation, and considered his level of discomfort as acceptable, experienced a higher level of pain under intravenous midazolam even though the endoscopist evaluated the pain as similar. All of the patients were asked, immediately after the endoscopy, if they would accept a repeated procedure under hypnosis. All agreed to another endoscopy under the same circumstances. In fact, two of the patients repeated the procedure on 2 and 3 occasions each, with excellent tolerance level.

Discussion

Anxiety is a common experience in patients who are about to undergo an invasive medical procedure. Increased stress levels are understood to be associated with a reduction in tolerance to the procedure. The sensation of asphyxia during the gastroscopy or the perception of a colonoscopy as a humiliating and stressful procedure are frequent stated adverse physiologic and psychological effects (Williams, Jones, Workhoven, & Williams, 1975). Anxiety is also associated with an increase in recuperation time, the need for post-procedure medication and decrease acceptance of the procedure. Additionally, anxiety can hamper acceptance of any future endoscopies (Williams, Jones, Workhoven & Williams, 1975).

In order to control anxiety endoscopists have usually employed cognitive techniques, supplying the patient with information about the procedure. In some cases, this information was not limited to a unpleasant meticulous description of the procedure, but also contained sensory descriptions of what patients could feel and even smell during the exploration. The information and descriptions increase patient awareness that, in turn, is associated with a significant decrease of anxiety with regards to the procedure, recuperation time, and reaction to pain. Ideally the information should be tailored in an individualized manner, depending on the patients psychological characteristics (Morgan, Kaushick, & Basset, 1998). Unfortunately the information does not alter the dose of intravenous sedation used nor the pain experienced during the endoscopy.

The hypnosis that was used included direct and indirect suggestions, metaphors, and images that can facilitate relaxation and pain control in patients undergoing medical procedures (Zimmerman, 1998; Barber, 1960). In one study, 50 % of patients undergoing endoscopy under hypnosis reported good tolerance (Cadranel et al., 1994). They report that “hypnotic relaxation resulted in moderate or deep sedation in 50% of the patients.” As they

state “in the patients in whom the hypnosis was successful, pain was less intense than in patients in whom was unsuccessful” (p. 127). Our cases reported relatively superior results.

We first used the knowledge of the exploration and of hypnosis aimed at achieving a calm state to control anxiety in the first moments of the exploration. An example is, “When you open your mouth to place the device which will allow the gastroscopic to enter, your brain will generate a state of relaxation, which will increase endorphin production”. In our second step we bring about the anaesthesia of the oropharynx by using the appropriate suggestions. For example, “Finally, when the endoscopist informs you he is finished, your body will return to its previous state, having forgotten any problem or small discomfort which you may have experienced, waking up happy, pleased and glad to have participated in your cure and improving your quality of life.”

In the case of a colonoscopy we lead the patient to the same sensations that will provoke an epidural anaesthesia through suggestions at the moment of introduction of the fibroscopy: For instance, “As you sense the exploration begin, you may recognize how quickly your brain can trigger the epidural anaesthesia similar to the state you have already learned, along with the relaxation and well being sensation that help you to collaborate with the endoscopist. When your doctor tells you the exploration is finished, you will experience both a sensation of pleasure and well being. You will forget any unpleasant sensation that you may have experienced, waking up happy having participated in your cure and improving your quality of life.”

The degree of pain control was sufficient to permit completion of the endoscopy, including biopsy, even when prior attempts using intravenous sedation were unsuccessful. In only one patient was it necessary to stop the colonoscopy before reaching the cecum. Severe intestinal inflammation and fear of bowel perforation, not pain, prompted premature termination of the colonoscopy.

However, hypnosis facilitated an adequate endoscopy intervention in all the cases and without any discomfort in 85 % of the endoscopies performed with 100% acceptance by patients. In 6 of the colonoscopies the patients were asked to focus their attention on the video screen, this produced good subjective results. Whenever possible the use of this complementary technique is recommended as simply being able to see the endoscopic procedure improves the tolerance in 92 % of the patients (Kozarec et al., 1997).

In the future, the application of modifications of behaviour, by means of video tapes, pamphlets and information given to the patient, could include post-hypnotic suggestions and simple relaxation techniques (Zimmerman, 1998). These techniques presented in a form in which the patient can understand may also help to reduce the levels of procedure related anxiety. To this extent, the avoidance of anaesthesia reduces cost and risk to the patient and therefore the use of hypnosis is a promising cost containment strategy (Probert, Jayanthi, Quinn, & Mayberry, 1991).

Likewise, in the case of the colonoscopy the application of profound sedation techniques will continue to be recommended. This requires trained staff, time, and resources prior to the exploration. The advantage of using hypnosis is that recuperation of the patient is immediate and a temporary life style modification is not required.

Although in some cases the patients could consider themselves inadequate for hypnosis due to resistance to the procedure, some will also be resistant to intravenous sedation for unique reasons and will be at increased risk if they use sedation. All the patients on whom a gastroscopy was performed were selected specifically because they previously experienced a lack of tolerance. In the selection of the patients for the colonoscopy,

inclusion in the study was only allowed for patients undergoing an exploration for the first time. In the case of the patients doing re-explorations, only those patients who explicitly accepted this type of hypnosis were included. Nevertheless, the results of this study endorse the effectiveness of hypnotic procedure and we believe that its practice could become routine for patients with the need for analgesia and with an elevated risk of complications if intravenous sedation is used.

In conclusion, hypnosis appears to be a safe and effective procedure for significantly reducing the anxiety of patients who undergo digestive endoscopies. It presents the advantage of being reproducible and does not need a prolonged period of subsequent recuperation or modifications of life habits in the hours following the exploration, for example, driving. For these reason, we believe that it would be desirable to perform a controlled and randomized trial that defines, in a large number of patients, the parameters of usefulness and the cost benefit relationship of hypnosis in patients who will undergo an endoscopic exploration of the digestive system.

Sutherland and Knox (1976) in a letter published in *The Lancet* said something which continues to be valid and worth repeating: “We were impressed by the ease of endoscopy and lack of distress to the patients using hypnorelaxation, and the patients were able to go home shortly after the procedure. Although the time required to prepare the patient beforehand is a disadvantage, this should not present a major problem in a well-organized endoscopy unit” (p. 1244).

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