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Hypnosis to Manage Anxiety and Pain Associated with Colonoscopy for Colorectal Cancer Screening: Case Studies and Possible Benefits

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HYPNOSIS TO MANAGE ANXIETY AND PAIN ASSOCIATED WITH COLONOSCOPY FOR COLORECTAL CANCER SCREENING:
Case Studies and Possible Benefits

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Abstract: This study explored using hypnosis for pain and anxiety management in 6 colonoscopy patients (5 men, 1 woman), who received a hypnotic induction and instruction in self-hypnosis on the day of their colonoscopy. Patients' levels of anxiety were obtained before and after the hypnotic induction using Visual Analogue Scales (VAS). Following colonoscopy, VASs were used to assess anxiety and pain during colonoscopy, perceived effectiveness of hypnosis, and patient satisfaction with medical care. Hypnotizability was assessed at a separate appointment. The authors also obtained data (time for procedure, number of vasovagal events, and recovery time) for 10 consecutive patients who received standard care. Results suggest that hypnosis appears to be a feasible method to manage anxiety and pain associated with colonoscopy, reduces the need for sedation, and may have other benefits such as reduced vasovagal events and recovery time.

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Colorectal cancer is the second leading cause of cancer-related death in the United States (Greenlee, Hill-Harmon, Murray, & Thun, 2001) and accounts for nearly 60,000 deaths each year (Jemal et al., 2003). Screening for colorectal cancer can reduce the death rate through early detection of cancer or premalignant polyps (Ransohoff & Sandler, 2002). Colonoscopy is considered the most accurate screening method for colorectal cancer and is recommended for people with increased risks, such as those with a personal or family history of adenomatous polyps, colorectal cancer, ulcerative colitis, or Crohn’s disease (Smith, Cokkinides, & Eyre, 2003). Also, a screening colonoscopy is recommended every 10 years beginning at age 50 (Anderson & May, 1995).

However, colonoscopy is often perceived as an anxiety-provoking and painful procedure that can lead to avoidant behavior (Parker, 1992). It is conceivable that patients with anticipation of pain or worry about medical findings would be anxious before and during the procedure. In fact, the majority of patients undergoing a colonoscopy are given intravenous sedation consisting of an opiate and a benzodiazepine. Unfortunately, these highly sedating medications and analgesics can be associated with cardiovascular complications including respiratory depression and hypotension. When severe, such complications can be catastrophic and even cause death (Early, Saifudin, Johnson, King, & Marshall, 1999). Cardiovascular complications associated with sedation represent the most common source of morbidity and mortality associated with colonoscopy. Increased sedative medication use during colonoscopy may not only increase the likelihood of sedative-related complications such as respiratory depression but also can prolong recovery-room stay, delay discharge, and can cause intra- and postoperative complications. Further, because of these complications, some patients do not wish to be heavily sedated. In spite of this, there are few alternatives available to patients who need to complete a traditional colonoscopy.

It has been widely recognized that methods to decrease patient anxiety and increase patient comfort during colonoscopy are important for acceptance, toleration, satisfaction, and completion of the procedure (Binek et al., 2003; Lazzaroni & Bianchi Porro, 2003; Walsh & Terdiman, 2003). A nonpharmacological method to reduce anxiety and pain associated with colonoscopy could have few side-effects and potentially could decrease the need for sedating medication, reduce recovery time, and increase patient satisfaction.

Although hypnosis for colonoscopy has not been adequately investigated, there is considerable evidence that hypnosis is an effective tool in managing pain associated with other types of invasive medical procedures (Milling & Costantino, 2000; Montgomery, David, Winkel, Silverstein, & Bovbjerg, 2002; Montgomery, DuHamel, & Redd, 2000; Patterson & Jensen, 2003). For example, studies have indicated that hypnosis is effective in reducing emotional distress and pain associated with
excisional breast biopsy (Montgomery, Weltz, Seltz, & Bovbjerg, 2002), emotional distress in dental and coronary patients (Ashton et al., 1995, 1997; Enqvist, von Konow, & Bystedt, 1995), time to discharge in surgical patients (Bonke, Schmitz, Verhage, & Zwaveling, 1986; Person, 1961; Rapkin, Straubing, & Holroyd, 1991), and pain reduction in cancer patients with advanced disease (Elkins, Cheung, Marcus, Palamara, & Rajab, 2005). Also, the potential use of hypnosis as an adjunctive treatment for pain and anxiety during invasive medical procedures has been strongly suggested in a recent study by Lang et al. (2000), which demonstrated that a brief hypnotic intervention during an invasive radiological procedure was effective in controlling pain, reducing distress, increasing hemodynamic stability, and in reducing procedure time.

However, few studies have explored the potential use of hypnosis for colonoscopy, and the existing data have been mixed. One case report has suggested that hypnosis may reduce anxiety and promote patient comfort during colonoscopy (Sutherland & Knox, 1976). Cadranel et al. (1994) conducted a small study and found evidence to suggest that pain was less intense in patients who successfully “achieved hypnotic relaxation.” However, successful use of hypnosis was not well defined in that paper. A more recent study (Conlong & Rees, 1999) found hypnosis to be effective in reducing agitation but did not find hypnosis to be effective in reducing discomfort during colonoscopy. That study has been criticized (Gracey-Whitman, 2000) because only 5 minutes were allowed to hypnotize patients. It is possible that such a short hypnotic induction may not have been sufficient preparation. Therefore, while there is reason to believe hypnosis could be an effective intervention for management of anxiety and pain associated with colonoscopy, additional research is needed to further explore the potential benefit of hypnosis for colonoscopy.

The purpose of the present case report study is twofold: (a) to explore the feasibility of brief hypnotic relaxation with patients undergoing colonoscopy and (b) to explore the perceived effectiveness of hypnosis and possible benefits in managing anxiety and pain during colonoscopy. A total of 6 patients participated in the study to receive the hypnosis intervention. Case report data are presented. Also, retrospective data on 10 consecutive patients who received standard care are presented for comparison.

**METHOD**

**Patients**

Six patients scheduled for colonoscopy for colorectal cancer screening at Scott and White Hospital were recruited. All of the patients were referred from a family practice clinic (Dr. Patel). None of the patients had a previous history of colorectal cancer or previous experience with colonoscopy. Informed consent was obtained prior to participation in
the study. This study was approved by the Scott and White Institutional Review Board prior to initiation. Eligibility criteria for participants were: at least 18 years of age; have no previous diagnosis of cancer; no previous experience with colonoscopy; and agree to attempt to undergo colonoscopy with hypnosis for sedation. Exclusion criteria included a self-report of pregnancy or any psychological diagnosis or characteristics that in the opinion of the principal investigator would interfere with participation in the study (e.g., a history of psychosis or borderline personality disorder), however no referred patients were excluded. Patients included 5 men and 1 woman. Age of patients ranged from 53 to 68 years (mean = 58, SD = 6.2). Five of the patients were Caucasian men and one patient was an African American woman. All of the patients were married and had one or more years of a college education.

To provide an indication of the procedure and recovery time experienced by patients during usual standard care, we completed a retrospective chart review of 10 consecutive patients who received colonoscopy by the same physician (Dr. Joseph White) during the same period of time as those who received the hypnosis intervention. In the standard care group, there were seven Caucasian women and three Caucasian men, who ranged in age from 48 to 69 years (mean age = 56.10, SD = 7.28).

Measures

For patients who received the hypnosis intervention, demographic information (age, education, marital status, ethnic group) was collected from them prior to the colonoscopy procedure. In addition, available patient medical data (time to complete the colonoscopy procedure, time in the recovery room to discharge, the number of vasovagal and hypoxic events, and sedative use) were reviewed following the colonoscopy procedure for both those who participated in the hypnosis intervention and those who received standard care. As is standard practice in our hospital, vasovagal events were defined as a drop in blood pressure ≥20 mmHg of baseline or heart rate drop of ≥20 beats per minute of baseline and recorded by a nurse assisting during the procedure.

A 10 cm visual analog scale (VAS) was used to measure patients’ anxiety and pain. To assess anxiety, patients were asked, “How anxious are you feeling right now?” (both before and after the hypnotic intervention) and “How anxious were you during the colonoscopy?” This VAS was anchored by not at all anxious and as anxious as I could be. To assess pain, patients were asked “How much pain did you feel during the colonoscopy?” This VAS was anchored by no pain at all and as much pain as I could have.

Overall satisfaction with medical care was assessed with a VAS. Patients were asked, “Overall, how satisfied were you with the medical care you received during your colonoscopy today?” This VAS was anchored by completely unsatisfied and completely satisfied.
Patients were also asked to rate how effective they perceived hypnosis to be in controlling their anxiety and pain. VAS ratings were obtained for the effectiveness in controlling both anxiety and pain anchored by completely ineffective and completely effective.

The Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C; Weitzenhoffer & Hilgard, 1962) was administered to assess hypnotizability. The SHSS:C consists of a hypnotic induction and suggestions, which are scored from 0 to 12 according to specific criteria (Hilgard, 1965).

Procedure

Patients receiving the hypnosis intervention were met by a research study coordinator on the day of their appointment for colonoscopy to complete demographic questionnaires and a baseline measure of anxiety. The patients then met with a research hypnotherapist (Dr. Elkins or Dr. Marcus) and participated in a standardized hypnotic induction. They were provided with an audiocassette tape player, a tape recording of a hypnotic induction for relaxation, and instructions in the use of the tape recording for hypnosis during the colonoscopy. Following administration of the hypnosis session, the patients’ levels of anxiety were assessed. After completion of the colonoscopy, the patients’ levels of anxiety and pain during the colonoscopy were assessed. Also, patients completed the other postcolonoscopy measures at that time (i.e., ratings of effectiveness of hypnosis and satisfaction). Patients were also asked to schedule a time to complete the measure of hypnotizability. Patients were compensated $25.00 for their participation and time after the measure of hypnotizability had been completed.

The hypnotic induction followed a transcript that lasted approximately 20 minutes. It included suggestions for physical and emotional relaxation; suggestions to deepen the relaxed state; suggestions to imagine (dissociate to) a “special place”; instructions for how the patient can use hypnosis on his or her own (i.e., self-hypnosis with a tape recording); and for feelings of control. In addition, positive suggestions (e.g., you will feel calm and comfortable; at ease and in control) and suggestions for control of pain and anxiety (e.g., you will feel very little pain; most of the pain will be under control most of the time; and very little anxiety; you will feel calm and relaxed; you will notice a peaceful feeling and perhaps a numbness).

Prior to colonoscopy, patients’ demographic information was obtained and the patients were provided with information on the procedure and signed a medical procedure informed consent (in addition to the study informed consent) for the procedure. Preparation for all patients also included giving instructions and colonic preparation with use of phosphosoda the night before and morning of the procedure or Colyte the evening prior to the procedure. Prior to beginning the colonoscopy, an intravenous cannula was placed in the forearm of
patients to establish intravenous access to allow sedation at any time during the procedure if requested by the patient or at the physician’s discretion. To reduce variance due to the influence of different physicians, the colonoscopy procedures were performed by the same physician (Dr. Joseph White). Colonoscopy procedures were all performed using a Pentax video colonoscope. All colonoscopies began without premedication. However, pharmacological sedation remained available to participants as needed.

Our standard of care is to offer patients a choice of beginning colonoscopy without sedation. All patients had pharmacological sedation available to them throughout the procedure and were informed that they could request it at any time during the colonoscopy. If sedation is requested by a patient once the procedure has begun, midazolam (starting at 1.0 mg initially and gradually increasing by 1.0 mg) and meperidine (starting at 50 mg initially and gradually increasing by 25 to 50 mg) are administered IV until patient comfort is achieved. The duration of time of the procedure and time to discharge (recovery time) were determined and recorded. Correctly locating the cecum was verified by identification of the ileocecal valve, the valve orifice, and the appendicial orifice.

RESULTS

Case report data and results are presented for each patient who received the hypnosis intervention. (Note: recovery time for the patients who received the hypnosis intervention included time required to meet with the study coordinator and complete study instruments).

Case One

B. L. is a 54-year-old Caucasian man who was referred by his primary care physician for colonoscopy for colorectal cancer screening. The reason for referral was that the patient was average-age risk desiring a screening exam. Colonoscopy procedure time was 7 minutes and recovery time after procedure was 3 minutes. No mucosal abnormalities were noted. Upon alerting from hypnosis and completion of colonoscopy, the patient spontaneously commented: “I feel very relaxed . . . I felt really relaxed the whole time.” The patient rated his anxiety as 1.4 before hypnosis and .8 after the hypnotic induction. Anxiety rating during colonoscopy was 1.3. Pain rating during colonoscopy was 0.5. His score on the SHSS:C was 3. The patient rated the effectiveness of hypnosis in controlling anxiety and pain during colonoscopy as 9.1 and 9.1, respectively. Satisfaction was rated as 9.0. There were no vasovagal events and no hypoxemic events.
Case Two

K. L. is a 53-year-old Caucasian man who was referred by his primary care physician for colonoscopy for colorectal cancer screening. Colonoscopy procedure time was 13 minutes. The patient rated his anxiety as 1.9 before hypnosis and .6 after the hypnotic induction. Anxiety rating during the colonoscopy was 2.7. Pain rating during colonoscopy was 3.4. His score on the SHSS:C was 7. The patient rated the effectiveness of hypnosis in controlling anxiety and pain during colonoscopy as 6.6 and 5.5, respectively. Satisfaction was rated as 9.3 (Note: recovery time after colonoscopy was not determined for this patient but is noted for all other patients in this study). There was one vasovagal event and no hypoxemic events.

Case Three

I. R. is a 63-year-old Caucasian man who was referred by his primary care physician for colonoscopy for colorectal cancer screening. The patient was diabetic and was allowed fluids during preparation. Procedure time was 10 minutes and recovery time after the procedure was 15 minutes. No mucosal abnormalities were detected other than scattered left sided diverticula. The patient rated his anxiety as 7.9 before hypnosis and 0.9 after the hypnotic induction. Anxiety rating during colonoscopy was 0.9. Pain rating during colonoscopy was 0.7. His score on the SHSS:C was 10. The patient rated the effectiveness of self-hypnosis in controlling anxiety and pain during colonoscopy as 9.2 and 9.2, respectively. Satisfaction with medical care was rated as 9.3. There was one vasovagal event and no hypoxemic events.

Case Four

Q. A. is a 57-year-old Caucasian man who was referred by his primary care physician for colonoscopy for colorectal cancer screening. Colonoscopy procedure time was 17 minutes and recovery time after the procedure was 21 minutes. Scattered left-sided diverticula were noted as well as moderate sized internal hemorrhoids. The patient rated his anxiety as 5.5 before hypnosis and 0.1 after the hypnotic induction. Anxiety rating during colonoscopy was 8.0. Pain rating during colonoscopy was 8.3. His SHSS:C score was 3. The patient rated the effectiveness of self-hypnosis in controlling anxiety and pain during colonoscopy as 3.2 and 0.8, respectively. However, he reported that he did not use the self-hypnosis recording during the procedure itself. Satisfaction with medical care was rated as 8.3. There were no vasovagal events and no hypoxemic events.

Case Five

B. R. is a 67-year-old Caucasian man who was referred by his primary care physician for colonoscopy for colorectal cancer screening. Colonoscopy procedure time was 14 minutes and recovery time after the procedure was 10 minutes. Multiple sigmoid diverticula were noted. The
patient rated his anxiety as 1.6 before hypnosis and 0.0 after the hypnotic induction. Anxiety rating during colonoscopy was 1.7. Pain rating during colonoscopy was 0.7. SHSS:C score was 9. The patient rated the effectiveness of self-hypnosis in controlling anxiety and pain during colonoscopy as 9.5 and 9.5, respectively. Satisfaction with medical care was rated as 9.5. There were no vasovagal events and no hypoxemic events.

Case Six

D. T. is a 52-year-old African American woman who was referred by her primary care physician for colonoscopy for colorectal cancer screening. Colonoscopy procedure time was 15 minutes and recovery time after the procedure was 5 minutes. No mucosal abnormalities were noted. The patient rated her anxiety as 4.5 before hypnosis and 0.6 after the hypnotic induction. Anxiety rating during colonoscopy was 0.4. Pain rating during colonoscopy was 1.2. Her SHSS:C score was 11. The patient rated the effectiveness of self-hypnosis in controlling anxiety and pain during colonoscopy as 8.3 and 9.1, respectively. Satisfaction with medical care was rated as 9.5. There were no vasovagal events and no hypoxemic events.

Summary of Six Hypnosis Intervention Cases

For the 6 patients who received the hypnosis intervention, the average time of procedure was 12.6 (SD = 4.03) minutes and for the 5 patients with valid recovery times, the mean time to discharge after colonoscopy was 10.8 (SD = 4.08) minutes. None of the patients required any sedation prior to, during, or after the colonoscopy procedure, 2 experienced only one vasovagal event each, and none experienced any hypoxemic event.

Figure 1 summarizes the effect of hypnosis on preprocedure anxiety for each of the 6 patients. Anxiety was reduced prior to colonoscopy for all patients to less than 1.0 on a 0 to 10 visual analog scale.

Figure 2 summarizes the levels of anxiety and pain during colonoscopy as well as scores on the SHSS:C. All patients who received hypnosis reported minimal anxiety and pain (2.5 and 3.0 or less, respectively) with the exception of Case Four, who reported moderate anxiety and pain. Case Four also had the lowest SHSS:C score, indicating that he was in the low range of hypnotizability and reported that he did not actually use self-hypnosis during his colonoscopy.

For all patients who received hypnosis, the average perceived effectiveness of hypnosis in managing anxiety and pain was 7.4 (SD = 2.6) and 6.8 (SD = 3.7), respectively. The average rating of satisfaction with medical care was 9.1 (SD = .50) on a 0 to 10 visual analog scale.

Summary of Standard Care Cases

We completed a retrospective chart review of 10 consecutive patients who received standard care colonoscopy by the same physician (Dr. Joseph
White) during the same period of time as those who received the hypnosis intervention. For 9 of the 10 records reviewed retrospectively, data were available for the mean procedure (mean = 13.00; SD = 6.40) and the mean time to discharge after the colonoscopy was 49.78 (SD = 13.89) minutes. All of those in the standard care group received sedation of meperdine 50 mg and midazolam (mean = 2.5, SD = .71). Eight of the 10 patients experienced at least one vasovagal event during the procedure; the number of events were four (n = 2), five (n = 2), eight (n = 1), nine (n = 1), and thirteen (n = 1).

Figures 3, 4, and 5 provide a visual summary (i.e., box plots) of the procedure times (n = 6/n = 9), recovery time (n = 5/n = 9), and number of vasovagal events (n = 6/n = 10) according to whether patients received the hypnosis intervention or standard care.
Figure 3. Length of colonoscopy procedure time.

Figure 4. Recovery time following colonoscopy.
Figure 3 illustrates the average time to complete the colonoscopy procedure for both the hypnosis and standard care conditions. The results suggest that the average procedure time was comparable regardless of whether the patient received the hypnosis intervention (mean = 12.60, \( SD = 4.03 \)) or standard care (mean = 13.00, \( SD = 6.40 \)).

Figure 4 summarizes the average recovery time for the hypnosis condition and standard care. The average recovery time for those who received the hypnosis intervention (mean = 10.8, \( SD = 7.36 \)) appeared to be markedly lower than the recovery time for those who received standard care (mean = 49.78, \( SD = 13.89 \)). In fact, the longest length of recovery time for any of the patients who received the hypnosis intervention was 21 minutes (including completion of study instruments), whereas the shortest length of recovery time for any patients who received standard care was 30 minutes.

Figure 5 provides a summary of the average number of vasovagal events for both the hypnosis and standard care conditions. There were fewer occurrences of vasovagal events during the colonoscopy procedure (mean = 0.33, \( SD = 0.52 \)) for the hypnosis intervention vs. mean = 4.90 (\( SD = 4.18 \)) for standard care.

**DISCUSSION**

The results of the present case studies revealed that hypnosis can be utilized by patients undergoing colonoscopy and that pharmacological
sedation can be minimized or even eliminated for some patients. Minimal anxiety and pain (i.e., 3.4 or less) during colonoscopy were reported by 5 of the 6 patients in this study. Four of these patients scored within the moderate range of hypnotizability with an SHSS:C score of 7 or higher. One patient (Case Four) reported experiencing moderate anxiety and pain during his colonoscopy with an anxiety rating of 8.0 and pain rating of 8.3. It is noteworthy that this patient also scored in the low range of hypnotizability (i.e., SHSS:C score of 3) and reported that he did not actually use hypnosis during his colonoscopy. One other patient (Case One) also had an SHSS:C score of 3; however, he reported using the audiotape during the procedure and had an anxiety rating of only 1.3 and pain rating of only 0.5 during his colonoscopy. Therefore, it is impossible to determine whether the experiences of Case Four were due to lower hypnotizability scores, to his failure to use the audiotape, or some other factor.

Colonoscopy is often perceived as an anxiety-provoking procedure. Many patients experience anxiety in anticipation of undergoing colonoscopy. Such anxiety might result in a more difficult and painful procedure as anxiety can increase muscle tone and lower pain threshold resulting in greater medication use and an increase in sedation-related complications (Drossman et al., 1996). The present results indicated that a brief hypnotic induction can reduce preprocedure anxiety prior to undergoing colonoscopy, even for patients not at the very high end of the Stanford scale. Indeed, these results are consistent with published findings that most medical patients undergoing acute procedures benefit from hypnosis interventions (Montgomery, David et al., 2002). In the present case study, anxiety was reduced prior to colonoscopy for all patients to less than 1.0 on a 0–10 visual analog scale. Reduction of preprocedure anxiety could have benefits of reducing the need for preprocedure medication and could potentially reduce procedure time and need for sedation. However, hypnosis does not preclude rare complications of colonoscopy such as penetration of the bowel wall.

Overall, all patients receiving hypnosis for anxiety and pain management during colonoscopy reported a high level of satisfaction with their medical care. The average rating of satisfaction with medical care was 9.2 (SD = .46). For example, the following note was written by one patient (Case Three) to his family physician:

It was quite an experience. I went to the appointment wondering if I might be one of those people not subject to hypnosis, since I run pretty tense most of the time. The psychologist did a great job of preparing me for the induction, and I came out of it knowing that I felt relaxed and unafraid of the procedure. During the procedure itself, I had no pain or discomfort. I listened to a tape during the procedure, but opened my eyes a few times because I was fascinated by the images of the colon on
the monitors above. After they finished, I got dressed, answered some hypnosis-research questions, and walked out. No drugs, no recovery. It was an amazing experience and I’m glad I did it.

Also, in the present study only 2 patients who received the hypnosis intervention experienced one vasovagal event each. In contrast, 7 patients who received standard care experienced four or more vasovagal events. For the patients who received the hypnosis intervention, the average recovery time after the procedure was 10.8 minutes (SD = 7.36); this time even included the administration of the study instruments. This appears to be a considerably shorter recovery time relative to those who received pharmacological sedation for the colonoscopy procedure (i.e., standard care), which was an average of 49.78 (SD = 13.89) minutes. Moreover, the shorter recovery times and fewer medical complications (i.e., vasovagal events) seen here are consistent with the published literature suggesting these may be benefits of hypnosis during medical procedures (Lang et al., 2000).

However, there are limitations to this case report study. This study included a sample of patients that expressed interest in undergoing colonoscopy using hypnosis to minimize pharmacological sedation. There was a lack of randomization and there may be a selection bias in this population. A randomized clinical trial is needed to determine if colonoscopy with hypnosis is superior to standard care alone. Also, some patients may prefer sedation and further study is needed regarding satisfaction. There is also no evidence that the effects of hypnosis by a therapist are superior to that created by providing a hypnosis audiotape for use during colonoscopy alone. Despite these limitations, the reductions in preprocedure anxiety, the effectiveness of hypnosis in controlling pain, and the shortened recovery time found in this study are encouraging. The results of this pilot study strongly suggest that additional study is warranted to establish the potential benefits of hypnosis to manage anxiety and pain during colonoscopy.

REFERENCES


Einsatz von Hypnose bei Angst und Schmerzen im Zusammenhang mit Kolonoskopien bei kolorektalen Krebsuntersuchungen: Fallstudien und potentieller Nutzen

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La hipnosis para regular la ansiedad y dolor asociados con la colonoscopía para la evaluación del cáncer colorectal: Estudios de caso y posibles beneficios

Gary Elkins, Joseph White, Parita Patel, Joel Marcus, Michelle M. Perfect, y Guy H. Montgomery

Resumen: Este estudio exploró el uso de la hipnosis para la regulación de la ansiedad y dolor en 6 pacientes de colonoscopía (5 hombres, 1 mujer), que recibieron una inducción hipnótica e instrucciones para realizar auto-hipnosis el día de sus colonoscopías. Registramos los niveles de ansiedad antes de y después de la inducción hipnótica mediante Escalas Análogas Visuales (VAS). Después de la colonoscopía usamos los VAS para evaluar la ansiedad y el dolor durante la colonoscopía, la eficacia percibida de la hipnosis, y la satisfacción de los paciente con la atención médica. Se evaluó la hipnotizabilidad en una cita aparte. Los autores también obtuvieron datos (duración del procedimiento, número de sucesos vasovagales, y tiempo de recuperación) en 10 pacientes consecutivos que recibieron el cuidado convencional. Los resultados sugieren que la hipnosis parece ser un método factible para regular la ansiedad y dolor asociados con la colonoscopía, reduce la necesidad de sedación, y puede tener otros beneficios como reducciones en eventos vasovagales y tiempo de recuperación.

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