



International Journal of Clinical and Experimental Hypnosis

ISSN: 0020-7144 (Print) 1744-5183 (Online) Journal homepage: <http://www.tandfonline.com/loi/nhyp20>

Anxiety Reduction Using Hypnotic Induction and Self-Guided Imagery for Relaxation During Dermatologic Procedures

Philip D. Shenefelt

To cite this article: Philip D. Shenefelt (2013) Anxiety Reduction Using Hypnotic Induction and Self-Guided Imagery for Relaxation During Dermatologic Procedures, International Journal of Clinical and Experimental Hypnosis, 61:3, 305-318, DOI: [10.1080/00207144.2013.784096](https://doi.org/10.1080/00207144.2013.784096)

To link to this article: <https://doi.org/10.1080/00207144.2013.784096>



Published online: 16 May 2013.



Submit your article to this journal [↗](#)



Article views: 416



View related articles [↗](#)



Citing articles: 10 View citing articles [↗](#)

ANXIETY REDUCTION USING HYPNOTIC INDUCTION AND SELF-GUIDED IMAGERY FOR RELAXATION DURING DERMATOLOGIC PROCEDURES

PHILIP D. SHENEFELT¹

University of South Florida, Tampa, USA

Abstract: Many patients experience some degree of anxiety during dermatologic procedures. A prospective, randomized-control trial of hypnotic induction followed by self-guided imagery was conducted with patients in 3 groups: live induction, recorded induction, or control. By 20 minutes into the procedure, there was significantly reduced anxiety reported in the live-induction group compared with the control, whereas reported anxiety in the recorded-induction group was similar to that of the control group. All 13 in the live induction, 11 of the 13 in the recorded induction, and none of the 13 in the control group imagined scenes. The findings of this study suggest that live hypnotic induction followed by self-guided imagery can help to reduce anxiety experienced by many patients during dermatologic procedures.

Hypnosis has multiple uses in dermatology (Shenefelt, 2000). For dermatologic procedures such as excision of skin lesions, hypnosis can help reduce anxiety, needle phobia, and pain, as well as reduce postoperative discomfort. Induction of trance for relief of pain during surgery has been used for centuries. However, it is infrequently utilized in mainstream modern medical practice. James Esdaile (1850/1957) described his success beginning in 1845 in achieving hypnotic anesthesia while performing surgery in Calcutta, India. In 7 years, he had performed more than 2,000 pain-free operations. Of these, about 300 were what would be considered major surgeries such as amputations; the remainder were minor surgeries at a level similar to those performed by current-day dermatologists. When Esdaile returned to Scotland in 1852, a majority of his colleagues rejected his use of hypnoanesthesia.

Manuscript submitted March 11, 2012; final revision accepted June 1, 2012.

¹Address correspondence to Philip D. Shenefelt, Department of Dermatology and Cutaneous Surgery, College of Medicine, University of South Florida, MDC 079, 12901 Bruce B. Downs Blvd., Tampa, FL 33612, USA. E-mail: pshenefe@health.usf.edu

After the discovery of inhalation anesthesia with ether or chloroform, hypnoanesthesia for major surgery was largely abandoned, despite its advantage in lessening intraoperative and postoperative shock (Barabasz & Watkins, 2005). Hypnosis during minor procedures continues to be used at the periphery of mainstream medicine. Marmer (1959) said that indications for the use of hypnosis in anesthesiology are (a) to overcome fear, apprehension, and anxiety, (b) to induce analgesia and anesthesia, (c) to raise the pain threshold postoperatively, and/or (d) to aid in postoperative recovery.

Most of the clinical literature on the use of hypnosis for pain and anxiety relief has been on the anecdotal, case-report level until recently. Blankenfield (1991) provided a good review of what is now an older literature on adjunctive hypnosis in the care of surgery patients. Much of the relevant literature from the 1980s and 1990s was reviewed by Montgomery, Weltz, Seltz, and Bovbjerg (2002) and will not be repeated here. Fick, Lang, Logan, Lutgendorf, and Benotsch (1999) used the Spiegel eye-roll induction (Spiegel & Spiegel, 2004) followed by suggestions for self-guided imagery in the radiology procedure suite on 56 consecutive nonrandomized patients referred for interventional procedures. A standardized protocol and script was followed for research purposes. Providers had been trained in advanced rapport techniques and hypnosis with didactic instruction and role play, study of a treatment manual and video, and supervised practice. After the procedure was completed, patient hypnotizability was assessed with the Hypnotic Induction Profile (HIP; Spiegel & Spiegel, 2004). All 56 patients developed an imaginary scenario, with the chosen imagery highly individualistic. Imagined scenes included a beach, a walk, travel, or floating down a river or through the air. Other images included family or home activities or personal skills, hobbies, or tasks such as woodworking, fishing, dancing, etc. They concluded that average patients can engage in imagery, and topics chosen are highly individualistic. They also found the use of prerecorded tapes or provider-directed imagery likely to be less effective than self-directed imagery.

Although case reports are instructive, overgeneralizing from them can be risky unless they are similar to reports from well-controlled trials. Evidence-based medicine gives higher credibility to results from randomized controlled trials compared with case reports. Recently, there have been a number of published reports of good quality randomized control trials using hypnosis for presurgical, intraoperative, and postoperative pain and anxiety relief with significant positive results. Faymonville et al. (1997) randomized 60 patients undergoing plastic surgery with conscious sedation to either a control group with stress-reducing strategies or a hypnosis group. Intraoperative and postoperative anxiety and pain were significantly lower in the hypnosis group, along with a significant reduction in the amount of drug required for

conscious sedation. Mauer, Burnett, Ouellette, Ironson, and Dandes (1999) used a quasi-experimental research design with 60 hand surgery patients who received either standard treatment or standard treatment and hypnosis. Controlling for race, gender, and pretreatment scores, the hypnosis group had significantly decreased perceived pain intensity, perceived pain affect, and anxiety compared with controls. Those in the hypnosis group also had significantly fewer medical complications and had higher ratings of postoperative recovery. Montgomery et al. (2002) conducted a trial with 20 women randomized to standard care versus preoperative hypnosis for excisional breast biopsy. They found brief (10-minute) hypnosis to be effective in reducing post-surgery pain ($p < .001$) and distress both before and after surgery ($p < .025$). Defechereux et al. (2000) reported a prospective randomized study of thyroid and parathyroid procedures performed under hypnosis, local anesthesia, and minimal conscious sedation compared to 20 control patients with similar surgery under conventional anesthesia. Patients in the hypnoanesthesia group had significantly less inflammatory response, hemodynamic dysregulation, postoperative pain, postoperative fatigue, and convalescence time. Operative times, bleeding, and surgical comfort were similar in both groups.

Lang et al. (2000) conducted a prospective randomized three-group trial of adjunctive nonpharmacologic analgesia for invasive radiologic procedures. The control group had percutaneous vascular radiologic intraoperative standard intravenous (IV) conscious sedation care ($n = 79$), a structured-attention group ($n = 80$), and a hypnotic-induction group with self-guided imagery relaxation with optional IV sedation ($n = 82$). The authors found that pain increased linearly with time in the standard and the attention group but remained flat in the hypnosis group. Anxiety decreased over time in all three groups but more so with hypnosis. IV sedation drug use was significantly higher (1.9 units) in the standard group than in the structured attention (0.8 units) and self-hypnosis (0.9 units) groups. Hemodynamic stability was significantly higher in the hypnosis group (1 unstable) than in the attention (10 unstable) and standard (12 unstable) groups. Procedure times were significantly shorter in the hypnosis group (61 minutes) than in the standard group (78 minutes), with the attention group in between (67 minutes). They concluded that hypnosis was better at reducing pain and anxiety, in maintaining hemodynamic stability, and in shortening procedure time than standard intraprocedural care, whereas structured attention was intermediate between hypnosis and standard care. Lang and Rosen (2002) performed a cost analysis of data from the study comparing standard IV conscious sedation against hypnotic induction with self-guided imagery relaxation with optional IV sedation. They found that the average cost per case associated with standard IV sedation was \$638, compared with \$300 average cost per case for sedation and

hypnosis, or a cost savings averaging \$338 per case. For the 82 cases where hypnosis was utilized in the study, the cost savings amounted to about \$27,700.

Similarly, during dermatologic surgery, words can guide a patient into a state of self-directed imagery that produces relaxation and comfort during the procedure. Words can have a special impact when used to induce an altered state of consciousness such as a hypnotic state. As cited by Marmer (1959), Rudyard Kipling wrote, "Words are the most powerful drugs used by mankind" (p. 115). Aldous Huxley opined that "Words have a magical effect in the way they affect the minds of men," and Mark Twain quipped that "The difference between the right word and the almost right word, is like the difference between lightning and the lightning bug!" (as cited in Marmer, 1959, p. 115). I reported a case of a 51-year-old needle phobic woman who was freaking out in the middle of a skin surgery to remove a melanoma from her arm (Shenefelt, 2003). She was offered the Spiegel eye-roll induction (Spiegel & Spiegel, 2004) followed by self-guided imagery and within a minute became relaxed and stayed relaxed and calm throughout the rest of the procedure. Upon realerting after the procedure was over, she reported that she had gone on an imaginary shopping trip to Italy similar to one she had taken several years before. She was grateful for the relief and relaxation but had wanted a little more time in trance because she had not finished buying all of the items that she desired. This and several similar experiences motivated me to conduct a prospective randomized control trial of relaxation using hypnotic induction followed by suggestions for self-guided imagery.

METHOD

Participants

Patients who were scheduled to undergo dermatologic surgery by a dermatology resident in my dermatologic surgery clinic for removal of benign or malignant skin lesions were invited to participate in this randomized prospective trial. The study was approved and monitored by the University of South Florida Biomedical Institutional Review Board (IRB). Inclusion criteria were that the patient must be 18 years or older, able and willing to give consent and must pass the Mini-Mental State Exam (MMSE) with a score of 25 or greater (maximum score is 30). Exclusion criteria included patients unable to speak or hear English, those with a history of psychosis or serious mental disease, pregnant women, children under 18 years of age, institutionalized individuals, and those unable to give written consent. Using computer-generated randomization with preprinted sealed envelopes, participants were randomized into one of three groups: live hypnotic induction, recorded hypnotic induction, and control group.

Procedure

During the preoperative visit, the patient was invited to participate in the study. If they accepted after reading and having explained to them and signing the IRB approved "Informed consent to participate in research and authorization to collect, use, and share your health information" form, they were screened for inclusion and exclusion criteria and the MMSE was performed and baseline data were collected on blood pressure, heart rate, pain, and anxiety. Patients participating in this study were randomly assigned to the live induction group, the recorded induction group, or the control group just prior to the dermatologic surgery. Preoperative motivation and expectancy were assessed, as well as 10-minute preoperative and start-of-procedure blood pressure, heart rate, pain, and anxiety. The author's script in Appendix 1 (Shenefelt, 2003, p. 232) was used for trance induction and suggestion of self-guided imagery at the beginning of the dermatologic surgery. The script in Appendix 2 (Shenefelt, 2003, p. 232) was used for trance maintenance every 5 minutes during the procedure. The script in Appendix 3 (Shenefelt, 2003, p. 232) was used for trance termination at the end of the dermatologic surgery. The dermatologic surgery was performed by an IRB-approved dermatology resident. The measurements were performed at the appropriate times by an IRB-approved assistant. Every 10 minutes during the procedure, blood pressure, heart rate, pain, and anxiety were assessed. These were repeated at the end of the procedure and 10 minutes after the procedure was finished. For the live induction group, the author read the induction, maintenance, and termination script to the patient at the appropriate times, pacing while cueing into the patient's inhalations and exhalations. For the recorded induction group, a CD recording in the author's voice of the identically worded induction, maintenance, and termination scripts were played for the patient at the appropriate times. For the control group, no script was read. After completion of the procedure, the author performed the HIP (Spiegel & Spiegel, 2004) with every patient in each of the groups.

Measures

The MMSE was performed and scored at the preoperative visit. Blood pressure and heart rate were measured with a standard self-inflating blood pressure cuff with electronic digital readout at the preoperative visit, 10 minutes prior to the procedure, at the start of the procedure, every 10 minutes intraoperatively, at the end of the procedure, and 10 minutes after the procedure. Pain on a 0-to-10 Subjective Units of Discomfort (SUD) scale and anxiety on a 0-to-10 SUD scale were assessed and recorded at the preoperative visit, 10 minutes prior to the procedure, at the start of the procedure, every 10 minutes intraoperatively, at the end of the procedure, and 10 minutes after the procedure. Just prior to the procedure, the patient was asked "How motivated

would you feel to allow a relaxation process to help you to relax for a skin procedure on a scale of 0 to 10?" and their motivation score was recorded. They were also asked "How much do you expect that a relaxation process would work for you to help you relax on a scale of 0 to 10?" and their expectancy score was recorded. At the end of the procedure, every participant was asked "Were you able to imagine any scenes or experiences during the procedure?" and, if so, they were asked to describe them and the responses were recorded. After the procedure, every patient had the HIP performed and scored on the 10-point scale.

Statistical Analysis

Statistical analysis of the obtained results for the three groups was performed using the independent two-tailed *t* test with WinSTAT for Excel software (R. Fitch Software), and, because of the moderately small sample sizes, significant findings were then hand checked using the independent two-tailed *t*-test method given by Spence, Underwood, Duncan, and Cotton (1968). Comparison of the patient having an image versus no image for the three groups was done in a 2×2 contingency table using the Fisher's exact test performed online at www.graphpad.com/quickcalcs/contingency1.cfm.

RESULTS

There were 13 participants in each of the three groups for a total of 39 participants. In the live hypnosis group, all 13 were Caucasian with 7 males and 6 females, aged 23 to 75 with a mean of 59.2 years. In the recorded hypnosis group, there were 12 Caucasian and 1 black with 9 males and 4 females, aged 32 to 72 with a mean of 55.9 years. In the control group, all 13 were Caucasian with 7 males and 6 females, aged 48 to 76 with a mean of 66.1 years. The average MMSE was almost identical in the three groups at 29.69 for the live induction group, 29.77 for the recorded induction group, and 29.08 in the control group, with a range of 28 to 30 in each of the three groups. Skin lesions excised for the live hypnosis group included 3 with basal cell carcinoma, 6 with squamous cell carcinoma, 1 with dysplastic nevus, 2 with cyst, and 1 with trichoblastoma. The recorded hypnosis group had 5 with basal cell carcinoma, 4 with squamous cell carcinoma, 1 with dysplastic nevus, and 2 with cyst. The controls had 4 with basal cell carcinoma, 5 with squamous cell carcinoma, 1 with dysplastic nevus, and 3 with cyst. Lesion sizes for the live group varied from 0.4 centimeters (cm) to 4.5 cm and averaged 1.71 cm. For the recorded group, lesion size ranged from 0.5 cm to 4.5 cm and averaged 1.74 cm. For the control group, lesion size was from 0.8 cm to 3.6 cm with an average of 1.65 cm. In each of the

three groups, there were 12 excisions with linear closures and one excision with island pedicle flap. None of the factors of race, sex, age, type of lesion, or lesion size were significantly different in any of the three groups. Preoperative assessments of motivation for the relaxation process to help were similar in all three groups, with an average motivation for the live induction group of 8.54 and a range of 5 to 10, an average motivation for the recorded induction group of 8.46 with a range of 5 to 10, and an average motivation for the control group of 7.31 with a range of 5 to 10. Preoperative assessments of expectancy for the relaxation process to help were similar in all three groups, with an average expectancy for the live induction group of 6.31 and a range of 1 to 10, an average expectancy for the recorded induction group of 6.31 with a range of 3 to 10, and an average expectancy for the control group of 6.31 with a range of 0 to 10.

At 10 minutes, all participants were still undergoing the dermatologic surgery. The lengths of procedures were from 14 to 70 minutes. Before 20 minutes had elapsed, the dermatologic surgery had been completed on 2 patients in each group, leaving 11 participants still having dermatologic surgery at 20 minutes in each of the three groups. By the time 30 minutes had elapsed, there were 7 participants still having dermatologic surgery in the live induction group, 8 participants in the recorded induction group, and 8 participants in the control group. By the time 40 minutes had elapsed, there were 4 participants still having dermatologic surgery in the live induction group, 4 participants in the recorded induction group, and 4 participants in the control group. By the time 50 minutes had elapsed, there were 3 participants still having dermatologic surgery in the live induction group, 1 participant in the recorded induction group, and 1 participant in the control group. By the time 60 minutes had elapsed, there was 1 participant still having dermatologic surgery in the live induction group, 1 participant in the recorded induction group, and none in the control group. By the time 70 minutes had elapsed, there was 1 participant still having dermatologic surgery in the live induction group, none in the recorded induction group, and none in the control group. There was no significant difference in length of procedure time among the three groups. The numbers of participants in each group still having dermatologic surgery was too low by 30 minutes to have large enough numbers for meaningful statistical analysis. There was no significant between-group difference in blood pressure or heart rate before, during, or after the procedure. Systolic hypertension greater than 140 was noted in 8 of the 13 live induction group, 9 of the 13 in the recorded induction group, and 8 of the 13 in the control group. There was no syncope for any of the 39 patients. Pain was minimal in all three groups (see Table 1), with average pain at the start of the procedure of 0.38 with a range of 0 to 2 in the live induction group,

Table 1
Pain and Anxiety for Live, Recorded, and Control

Group	Procedure Time in Minutes	Number of Patients Remaining	Average Pain	Average Anxiety	Anxiety Range	Anxiety <i>t</i> test Live vs. Control	Anxiety <i>t</i> test Live vs. Recorded	Anxiety <i>t</i> test Recorded Vs. Control
Live	Start	13	0.38	3.31	0-7			
Recorded	Start	13	0.31	3.38	0-8		<i>ns</i>	
Control	Start	13	0.46	3.15	0-10	<i>ns</i>		<i>ns</i>
Live	10	13	0.15	1.77	0-5			
Recorded	10	13	0.31	2.31	0-6		<i>ns</i>	
Control	10	13	0.54	2.46	0-8	<i>ns</i>		<i>ns</i>
Live	20	11	0.10	1.00	0-3			
Recorded	20	11	0.64	2.27	0-5		$p = .075$	
Control	20	11	0.09	2.64	0-7	$p = .033^*$		<i>ns</i>
Live	End	13	0.08	0.77	0-3			
Recorded	End	13	0.08	0.77	0-5		<i>ns</i>	
Control	End	13	0.08	1.15	0-4	<i>ns</i>		<i>ns</i>
Live	10 Post	13	0.00	0.38	0-3			
Recorded	10 Post	13	0.15	0.69	0-4		<i>ns</i>	
Control	10 Post	13	0.08	1.15	0-5	<i>ns</i>		<i>ns</i>

Note. At 30 minutes and beyond, the numbers of patients remaining in each group were too small for meaningful statistical analysis. *ns* = not significant, independent two-tailed *t* test.

* $p < .05$, independent two-tailed *t* test.

average pain at the start of the procedure of 0.31 with a range of 0 to 2 in the recorded induction group, and average pain at the start of the procedure of 0.46 with a range of 0 to 4 in the control group. Average pain at 10 minutes into the procedure was 0.15 for the live induction group, 0.31 for the recorded induction group, and 0.54 for the control group. Average pain at 20 minutes into the procedure was 0.10 for the live induction group, 0.64 for the recorded induction group, and 0.09 for the control group. Average pain at 30 minutes into the procedure was 0.14 for the live induction group, 0.50 for the recorded induction group, and 0.13 for the control group. Average pain at the end of the procedure was 0.08 for the live induction group, 0.08 for the recorded induction group, and 0.08 for the control group. There was no significant difference in the HIP scores of the three groups performed after the end of the procedure, with the live induction group having an average of 6.04 on the 10-point scale and a range of 2 to 8.5, the recorded induction group having an average of 6.42 and a range of 1 to 8.5, and the control group having an average of 7.15 with a range of 0 to 10.

Anxiety among the three groups was similar at baseline at the preoperative visit, with an average of 1.77 and range of 0 to 6 for the individuals later randomized to the live induction group, an average of 1.46 and range of 0 to 5 for the individuals later randomized to the recorded induction group, and an average of 1.51 and range of 0 to 10 for the individuals later randomized to the control group. At the start of the procedure, anxiety was similar in all three groups with an average of 3.31 and range of 0 to 7 in the live induction group, an average of 3.38 with a range of 0 to 8 in the recorded induction group, and an average of 3.15 with range of 0 to 10 for the control group. At 10 minutes into the procedure, anxiety had dropped a little in all three groups, more so in the live induction group, with an average of 1.77 and range of 0 to 5 in the live induction group compared with an average of 2.31 with a range of 0 to 6 in the recorded induction group, and an average of 2.46 with range of 0 to 8 for the control group. By 20 minutes into the procedure, there was significantly less anxiety reported in the live induction group of 11 with an average of 1.00 and range of 0 to 3 compared with the control group of 11 with an average of 2.64 and range of 0 to 7, $p < .05$ at $p = .033$ for the independent two-tailed t test. The anxiety was substantially less in the live induction group of 11 with an average of 1.00 compared with the recorded induction group of 11 with an average of 2.27 and range of 0 to 5 at $p = .075$ for the independent two-tailed t test. The anxiety was about the same for the recorded induction group of 11 with an average of 2.27 compared with the control group with an average of 2.64 with no significant difference. By 30 minutes, the numbers of surgeries still proceeding with 7 in the live induction group, 8 in the recorded induction group, and 8 in the control group were too small for

meaningful statistical analysis. At the end of the procedure, anxiety had dropped more in all three groups, with an average of 0.77 and a range of 0 to 3 in the live induction group, an average of 0.77 with a range of 0 to 5 in the recorded induction group, and an average of 1.15 with a range of 0 to 4 for the control group. At 10 minutes after the procedure, anxiety had dropped more in the live induction groups, with an average of 0.38 and a range of 0 to 3 in the live induction group, an average of 0.69 with a range of 0 to 4 in the recorded induction group, and an average of 1.15 with range of 0 to 5 for the control group.

All 13 participants in the live hypnosis group, 11 of the 13 participants in the recorded hypnosis group, and none of the 13 participants in the control group described images of imagined scenes or activities during the procedure. For the 13 in the live induction group, the images included being in a boat on a lake, floating on a cloud in the sky, in a fenced-in hot tub area, in a pool at a waterfall in Israel, lying on the flat top of a boat in a lake, watching his wife quilt, surfing and waiting for a set of waves to come in, at the beach observing the water, lying on his bed in his dorm room, at the beach, out running around an oak tree, a musician playing a vibraphone for patients at a nursing home hearing and seeing chords, and sitting on the shore at a lake in Asheville, North Carolina. For the 11 of 13 who had images in the recorded induction group, the images included floating down a river, dead brother who went to heaven with Jesus, rowing a boat in a quarry in Iowa, riding in his Jeep and then lying at a beach, on a cloud in the sky, floating on the lake out in the boat fishing, on a beach behind a palm tree relaxing, at the beach, on top of Roan Mountain in Tennessee, at the beach holding a child in the air and laughing, and lying on a beach. For the 13 in the control group, none had imagined scenes or activities.

Fisher's exact test analysis of 2×2 contingency tables showed a two-tailed p value of less than .0001 comparing the 13 images in the live induction hypnosis group with none in the control group, a two-tailed p value of less than .0001 comparing the 11 images in the recorded induction group with none in the control group, and a two-tailed p value of .48 comparing the 13 images in the live induction group with the 11 images in the recorded induction group.

DISCUSSION

The results confirm for dermatologic procedures such as excision of benign and malignant skin lesions followed by skin closure that anxiety can be significantly reduced, $p < .05$ ($p = .033$), compared with controls using live induction hypnosis followed by suggestions for self-guided imagery. Having the patient choose his or her own self-guided imagery

seems to allow most individuals to reach a state of relaxation during procedures. The patient knows the way to relaxation and comfort but needs direction and facilitation to find his or her way to achieve them. The recorded induction hypnosis followed by recorded suggestions for self-guided imagery produced similar imagery elicitation to that of the live induction, both of which were significantly different from the lack of any images found in the control group at $p < .0001$. However, the recorded induction hypnosis did not produce significant anxiety reduction like the live induction did. The recorded induction group remained more similar to the control group with respect to anxiety during the procedure.

Factors that were very similar for each of the three groups and thus did not appear to be significant between-group variables included sex, age, race, type and length of skin surgery, MMSE score, motivation, expectancy, blood pressure, heart rate, pain, or hypnotizability based on the HIP scores. The HIP was performed after the procedure was over so as not to contaminate the findings during the procedure and was done to allow comparability among the three groups with respect to hypnotizability to ensure that differences in hypnotizability between the three groups were not a confounding factor. The higher predominance of Caucasians in the study compared with the racial and ethnic distribution in the study area in west central Florida of about 74% Caucasian, 15% Hispanic, 10% black, and 1% Asian is most likely due to the higher incidence of basal and squamous cell skin cancers in the lighter skin color of the Caucasians. Unlike the interventional radiology study (Lang et al., 2000) where pain could be substantial, the current study patients did not have significant pain because of the highly effective injectable local anesthetics used by dermatologists prior to skin surgery.

The significant anxiety reduction noted in the live induction group but not in recorded induction group when compared with controls is similar to significant anxiety reduction in the live hypnosis induction group and guided self-imagery results found in the larger interventional radiology study (Lang et al., 2000). That study had an intermediate structured attention group but did not have a recorded induction group. I chose to have a recorded induction group to test whether it was as effective at reducing anxiety as the live induction, and it was not. Since the script was the same for live and recorded hypnotic inductions, maintenance, and terminations, I consider it likely that the timing and pacing possible with the live inductions along with the presence of a caring person were important in helping to reduce anxiety. Replication of the current study at another site would be highly desirable to confirm the findings of significant anxiety reduction with live induction hypnosis followed by self-guided imagery during dermatologic procedures.

REFERENCES

- Barabasz, A., & Watkins, J. G. (2005). *Hypnotherapeutic Techniques*. New York, NY: Brunner-Routledge.
- Blankenfield, R. P. (1991). Suggestion, relaxation, and hypnosis as adjuncts in the care of surgery patients: A review of the literature. *American Journal of Clinical Hypnosis*, 33, 172–186.
- Defechereux, T., Degauque, C., Fumal, I., Faymonville, M. E., Joris, J., Hamoir, E., & Meurisse, M. (2000). L'hypnosédation, un nouveau mode d'anesthésie pour la chirurgie endocrinienne cervicale: Etude prospective randomisée [Hypno-sedation, a new method of anesthesia for cervical endocrine surgery: Prospective randomized study]. *Annales de Chirurgie*, 125, 539–546.
- Esdaile, J. (1957). *Hypnosis in Medicine and Surgery*. New York, NY: Institute for Research in Hypnosis and the Julian Press. (Original work published 1850)
- Faymonville, M. E., Mambourg, P. H., Joris, J., Vrijens, B., Fissette, J., Albert, A., & Lamy, M. (1997). Psychological approaches during conscious sedation. Hypnosis versus stress reducing strategies: A prospective randomized study. *Pain*, 73, 361–367.
- Fick, L. J., Lang, E. V., Logan, H. L., Lutgendorf, S., & Benotsch, E. G. (1999). Imagery content during nonpharmacologic analgesia in the procedure suite: Where your patients would rather be. *Academic Radiology*, 6, 457–463.
- Lang, E. V., Benotsch, E. G., Fick, L. J., Lutgendorf, S., Berbaum, M. L., Logan, H., & Spiegel, D. (2000). Adjunctive non-pharmacological analgesia for invasive medical procedures: A randomised trial. *Lancet*, 355, 1486–1490.
- Lang, E. V., & Rosen, M. P. (2002). Cost analysis of adjunct hypnosis with sedation during outpatient interventional radiologic procedures. *Radiology*, 222, 375–382.
- Marmer, M. J. (1959). *Hypnosis in anesthesiology*. Springfield, IL: Charles C. Thomas.
- Mauer, M. H., Burnett, K. F., Ouellette, E. A., Ironson, G. H., & Dandes, H. M. (1999). Medical hypnosis and orthopedic hand surgery: Pain perception, postoperative recovery, and therapeutic comfort. *International Journal of Clinical and Experimental Hypnosis*, 47, 144–161.
- Montgomery, G. H., Weltz, C. R., Seltz, M., & Bovbjerg, D. H. (2002). Brief presurgery hypnosis reduces distress and pain in excisional breast biopsy patients. *International Journal of Clinical and Experimental Hypnosis*, 50, 17–32.
- Shenefelt, P. D. (2000). Hypnosis in dermatology. *Archives of Dermatology*, 136, 393–399.
- Shenefelt, P. D. (2003). Hypnosis-facilitated relaxation using self-guided imagery during dermatologic procedures. *American Journal of Clinical Hypnosis*, 45, 225–232.
- Spence, J. T., Underwood, B. J., Duncan, C. P., & Cotton, J. W. (1968). *Elementary statistics* (2nd ed.). New York, NY: Appleton-Century Crofts.
- Spiegel, H., & Spiegel, D. (2004). *Trance and treatment: Clinical uses of hypnosis* (2nd ed.). Washington, DC: American Psychiatric.

Angstreduktion mithilfe hypnotischer Induktion und selbstgeführtem Bilderleben zur Entspannung während dermatologischer Eingriffe

Philip D. Shenefelt

Abstrakt: Viele Patienten erleben einen gewissen Grad an Angst während dermatologischer Eingriffe. Ein prospektives, randomisiert-kontrolliertes Experiment hypnotischer Induktion, gefolgt von selbstgeführtem Bilderleben wurde mit Patienten in drei Gruppen durchgeführt : live Induktion, aufgenommene Induktion und Kontrollgruppe. 20 Minuten nach Beginn berichtete die live Induktionsgruppe eine signifikante Reduktion der

Angst im Vergleich mit der Kontrollgruppe, während die berichtete Angst in der Tonband-Induktionsgruppe der der Kontrollgruppe glich. Alle 13 der live Induktionsgruppe, 11 von 13 der Tonbandgruppe und keiner der 13 in der Kontrollgruppe konnte Szenen hervorrufen. Die Resultate dieser Studie legen nahe, daß die live Hypnoseinduktion, gefolgt von selbstgeführtem Bilderleben bei der Reduktion der Angst, die von vielen Patienten während dermatologischer Eingriffe erlebt wird, helfen kann.

STEPHANIE REIGEL, MD

La réduction de l'anxiété à l'aide de l'induction hypnotique et de l'imagerie autoguidée comme outils de relaxation durant une intervention dermatologique

Philip D. Shenefelt

Résumé: De nombreux patients ressentent un certain degré d'anxiété durant une intervention dermatologique. Un essai clinique aléatoire contrôlé prospectif d'induction hypnotique, suivi d'une imagerie autoguidée, a été mené auprès de patients répartis en trois groupes : induction directe, induction enregistrée et groupe témoin. Vingt minutes après le début de l'intervention, les participants du groupe d'induction directe ont signalé un degré beaucoup moindre d'anxiété comparativement au groupe témoin, alors que le niveau d'anxiété signalé par le groupe d'induction enregistrée était similaire à celui du groupe témoin. Quant à l'imagerie autoguidée, les 13 sujets du groupe d'induction directe et 11 des 13 sujets du groupe de l'induction enregistrée se sont imaginé des scènes, alors qu'aucun des 13 sujets du groupe témoin ne s'en sont imaginées. Les résultats de cette étude indiquent que l'induction hypnotique directe, suivie d'une imagerie autoguidée, peut aider à réduire l'anxiété éprouvée par de nombreux patients durant une intervention dermatologique.

JOHANNE REYNAULT
C. Tr., (STIBC)

Reducción de ansiedad utilizando una inducción hipnótica y visualización autodirigida para relajación durante procedimientos dermatológicos

Philip D. Shenefelt

Resumen: Muchos pacientes experimentan algún grado de ansiedad durante procedimientos dermatológicos. Se realizó un ensayo aleatorio controlado prospectivo de inducción hipnótica seguido de una visualización dirigida con pacientes divididos en tres grupos: inducción en vivo, inducción grabada, y control. A los 20 minutos del procedimiento, se reportó una reducción significativa de ansiedad en el grupo de inducción en vivo comparado con el control, mientras que la ansiedad reportada por el grupo de la inducción grabada resultó similar a la del grupo control. Todos los 13 de la inducción en vivo, 11 de 13 de la inducción grabada, y ninguno de los 13 en el

grupo control visualizó escenas. Los resultados de este estudio sugieren que la inducción hipnótica en vivo seguida de visualización autoridrigida puede ayudar a reducir la ansiedad experimentada por muchos pacientes durante procedimientos dermatológicos.

OMAR SÁNCHEZ-ARMÁSS CAPPELLO, PhD
*Autonomous University of San Luis Potosi,
Mexico*