

# Hypnoanalgesia for Dilatation and Curettage Pain Control

Mehdi Fathi,<sup>1</sup> Susan Aziz Mohammadi,<sup>2</sup> Mehdi Moslemifar,<sup>3</sup> Kurosh Kamali,<sup>3</sup> Marjan Joudi,<sup>4,\*</sup> Azam

Sabri Benhangi,<sup>5</sup> Mojtaba Mohaddes,<sup>5</sup> Mona Joudi,<sup>6</sup> and Mozhgan Mohajeri<sup>7</sup>

<sup>1</sup>Associate Professor of Cardiac Anesthesia, Mashhad University of Medical Sciences, Iranian Scientific Society of Clinical Hypnosis, Mashhad, Iran

<sup>2</sup>Gynecologist, Hajar Hospital, Tehran, Iran

<sup>3</sup>Psychologist, Hajar Hospital, Iranian Scientific Society of Clinical Hypnosis, Tehran, Iran

<sup>4</sup>Assistant Professor of Surgery, Mashhad University of Medical Sciences, Mashhad, Iran

<sup>5</sup>Resident of Anesthesia, Mashhad University of Medical Sciences, Mashhad, Iran

<sup>6</sup>Assistant Professor of Radiotherapy, Mashhad University of Medical Sciences, Mashhad, Iran

<sup>7</sup>Anesthesiologist, Hajar Hospital, Tehran, Iran

\*Corresponding author: Marjan Joudi, Assistant Professor of Surgery, Mashhad University of Medical Sciences, Mashhad, Iran. E-mail: joodim@mums.ac.ir

Received 2016 December 09; Revised 2017 January 03; Accepted 2017 January 18.

## Abstract

There are many acceptable approaches ranging from light to moderate intravenous sedation or analgesic drugs that are used to provide pain control in dilatation and curettage. We report the use of hypnosis as a nonpharmacologic approach to control pain in this manner.

**Keywords:** Hypnosis, Hypnoanalgesia, Metrorrhagia, Uterine Bleeding

## 1. Introduction

Abnormal uterine bleeding (AUB) is one of the common causes that make women refer to gynecologists prior to the menopausal age. The frequency of such visiting is even higher in perimenopausal and postmenopausal periods (1). Abnormal uterine bleeding may affect the quality of life and emotional state of women (2).

This disorder is associated with acute pain and anxiety, which are similar to symptoms manifested in patients with abortion, who need several interventions to manage their disease (3). There are many acceptable approaches ranging from light to moderate intravenous sedation or analgesic drugs that are used to mitigate these symptoms.

Physicians should also be cautious about accurate dosage and side effects.

Also, some studies have cast doubt on the compatibility of the effect of drug duration with time required for surgery (4-6).

Hypnosis is an attentive, receptive brain state based on focal concentration, which is necessary to achieve the state of heightened receptivity for suggestions (7, 8).

In this study, we used hypnotic analgesia for a patient scheduled for endometrial biopsy due to untreated abnormal uterine bleeding.

## 2. Case Presentation

The patient was a 51-year-old woman referred to the Hajar hospital with severe menometrorrhagia that had lasted

for 20 days. After primary examinations, ultrasonography was performed and an endometrial thickening (19 mm) was observed. Coexisting diseases were rheumatoid arthritis, systemic lupus erythematosus, which persisted for 10 years, insulin dependent diabetes mellitus, hypertension, hyperlipidemia and coronary artery disease, as confirmed by the coronary angiography. In her medical history, she had two cases of uterine curettage under general anesthesia and C-section in her second delivery. She used aspirin 80 mg and prednisolone 10 mg on a daily basis and methotrexate 20 mg on a weekly basis. She had reported delirium following the previous sedation by ketamine.

After signing a written consent, the patient was informed about the possible side effects of hypnosis, such as psychotic disorders with an expert psychologist to eradicate her concerns before she was scheduled for hypnoanalgesia. In the operation room, standard monitoring included electrocardiography, pulse oximetry and noninvasive blood pressure were implemented and vital signs were recorded (blood pressure (BP) = 155/126 and heart rate (HR) = 90). The patient was injected with 200 mg hydrocortisone in consideration of long period of using prednisolone. No analgesic or sedative drugs were used as premedication. Then hypnosis was performed by an expert hypnotist, who was an anesthesiologist and hypnosis trainer in Iranian scientific society of clinical hypnosis with more than twenty years of experience in the field of hypnoanalgesia. Hypnosis inductive technique included eye fixation and verbal suggestion along with the naturalistic approach, as one of the main standard techniques,

and concentration to dissociate the patient from the operating room and send her into a place of her interest as reported by the patient in the preinduction interview.

The hypnotic state was deepened by a challenging method, an approach to focus the patient's concentration on an important aspect of her desires. After witnessing sufficient signs of trance, the surgery was initiated. Dilatation of vaginal canal and curettage biopsy of uterine were performed. Vital signs changed to BP = 125/95 and HR = 72 during the surgery and the patient's facies was relaxed.

No arrhythmias were seen during the surgery.

At the end of the surgery, the patient was conditioned for postoperative analgesia. The surgeon and patient were satisfied with the procedure. The patient reported no pain during the operation. The 48-hour follow-up did not show any sign of pain in the patient. No analgesic drugs were needed in the postoperative period. Also, biopsy examination indicated endometrial hyperplasia.

### 3. Discussion

In this study, hypnoanalgesia was presented as a successful and safe technique of drugless analgesia in endometrial biopsy and uterine curettage. Many studies have shown the effectiveness of nonpharmacologic techniques in reducing anxiety and pain associated with abortion in the first trimester, but there is a paucity of such reports on curettage for abnormal uterine bleeding, as reported in this study.

The effectiveness of hypnotic analgesia as a nonpharmacological approach to reduce pain and anxiety has been reported for decades. There are a host of studies on therapeutic effects of hypnosis during medical and surgical procedures under conscious sedation, which are in some cases superior to conventional and pharmaceutical treatments (9-14).

Renner et al. used hypnoanalgesia for controlling pain in patients with abortion showing that analgesic drugs could significantly reduce patients' pain (15). Dufresne et al. also applied hypnoanalgesia successfully to 290 women with abortion (16).

The pain, as an individual somatosensory-emotive experience, is associated with expectation and desire for pain relief. As noted by Isabell et al., psychological pain treatment approaches can be effective in mitigating the perception of pain (17). They showed that hypnosis reduced the need for N<sub>2</sub>O in patients undergoing the first-trimester surgical abortion (17).

Hypnosis may be used as iatrosedation, which refers to a group of psychosedation techniques not involving the administration of drugs (18). In this way, we can alleviate the side effects of drug. Moreover, hypnosis has several

advantages. After general anesthesia or even light intravenous sedation, the patients must receive special cares in a recovery room until they are fully awake, but in our experience the patient was awake immediately after the hypnosis. Because pain sensation may reduce the empathic communication between the physician and patient, it is necessary to provide optimal psychoemotional situation before the surgery. According to Phillip et al., preabortion psychological counseling can reduce the anxiety and pain experienced by women undergoing abortion (19). Postoperative pain management should consider by health care services (20). In our case, the recorded heart rates before and during the surgery were 90 and 72, respectively (the same reduction was observed for blood pressure as well). This shows the effect of hypnosis on reducing anxiety and negative emotions.

#### 3.1. Limitations

There was not a clear understanding of hypnosis in Iran for many decades. Also, considering different cultural views on hypnosis, using hypnosis instead of general anesthesia and/or its combination with anesthetic or sedative drugs may not be easily acceptable by the patients. As a result, anesthesiologists play an important role in describing the advantages and clarifying misconceptions surrounding hypnosis to the patients.

#### 3.2. Conclusion

Hypnosis may be considered as a helpful approach to reduce anxiety and control pain during and after surgery. Hypnosis is a safe and inexpensive procedure and anesthesiologists need to be familiar with its administration instead of intravenous sedation or as an adjunctive method in combination with anesthetic or sedative drugs. A major factor limiting the routine application of hypnosis as an analgesic approach is different hypnotizability of patients. Hypnoanalgesia is more successful in low-hypnotizable people.

Given the advantages of hypnosis, it is recommended to include anesthesia training and pain management education in the curriculum of medical students.

### References

1. Lasmar RB, Lasmar BP. The role of leiomyomas in the genesis of abnormal uterine bleeding (AUB). *Best Pract Res Clin Obstet Gynaecol.* .
2. Billow MR, El-Nashar SA. Management of abnormal uterine bleeding with emphasis on alternatives to hysterectomy. *Obstet Gynecol Clin North Am.* 2016;**43**(3):415-30. doi: [10.1016/j.ogc.2016.04.002](https://doi.org/10.1016/j.ogc.2016.04.002). [PubMed: 27521876].
3. Kulier R, Cheng L, Fekih A, Hofmeyr GJ, Campana A, Kulier R. Surgical methods for first trimester termination of pregnancy. *Cochrane Database Syst Rev.* 2001 doi: [10.1002/14651858.cd002900](https://doi.org/10.1002/14651858.cd002900).

4. American Society of Anesthesiologists Task Force on Acute Pain M. Practice guidelines for acute pain management in the perioperative setting: an updated report by the American Society of Anesthesiologists Task Force on Acute Pain Management. *Anesthesiology*. 2004;**100**(6):1573–81. [PubMed: [15166580](#)].
5. Smith GM, Stubblefield PG, Chirchirillo L, McCarthy MJ. Pain of first-trimester abortion: Its quantification and relations with other variables. *Am J Obstet Gynecol*. 1979;**133**(5):489–98. doi: [10.1016/0002-9378\(79\)90282-5](#).
6. Rawling MJ, Wiebe ER. A randomized controlled trial of fentanyl for abortion pain. *Am J Obstet Gynecol*. 2001;**185**(1):103–7. doi: [10.1067/mob.2001.115860](#). [PubMed: [11483912](#)].
7. Stewart JH. Hypnosis in contemporary medicine. *Mayo Clin Proc*. 2005;**80**(4):511–24. doi: [10.4065/80.4.511](#).
8. Kirsch I. Defining hypnosis for the public. *Contemp Hypn*. 1994;**11**(3):142–3.
9. Patterson DR, Jensen MP. Hypnosis and clinical pain. *Psychol Bull*. 2003;**129**(4):495–521. [PubMed: [12848218](#)].
10. Kanji N, White AR, Ernst E. Autogenic training reduces anxiety after coronary angioplasty: a randomized clinical trial. *Am Heart J*. 2004;**147**(3):E10. doi: [10.1016/j.ahj.2003.10.011](#). [PubMed: [14999212](#)].
11. Liossi C, White P, Hatira P. Randomized clinical trial of local anesthetic versus a combination of local anesthetic with self-hypnosis in the management of pediatric procedure-related pain. *Health Psychol*. 2006;**25**(3):307–15. doi: [10.1037/0278-6133.25.3.307](#).
12. Stoelb BL, Molton IR, Jensen MP, Patterson DR. The Efficacy of Hypnotic Analgesia in Adults: A Review of the Literature. *Contemp Hypn*. 2009;**26**(1):24–39. doi: [10.1002/ch.370](#). [PubMed: [20161034](#)].
13. Joudi M, Fathi M, Izanloo A, Montazeri O, Jangjoo A. An Evaluation of the Effect of Hypnosis on Postoperative Analgesia following Laparoscopic Cholecystectomy. *Int J Clin Exp Hypn*. 2016;**64**(3):365–72. doi: [10.1080/00207144.2016.1171113](#). [PubMed: [27267679](#)].
14. Izanloo A, Fathi M, Izanloo S, Vosooghnia H, Hashemian A, Sadrzadeh SM, et al. Efficacy of conversational hypnosis and propofol in reducing adverse effects of endoscopy. *Anesth Pain Med*. 2015;**5**(5):27695. doi: [10.5812/aapm.27695](#).
15. Renner RM, Jensen JT, Nichols MDN, Edelman A, Renner RM. Pain control in first trimester surgical abortion. *Cochrane Libr*. 2009(2) doi: [10.1002/14651858.CD006712.pub2](#).
16. Dufresne A, Rainville P, Dodin S, Barre P, Masse B, Verreault R, et al. Hypnotizability and opinions about hypnosis in a clinical trial for the hypnotic control of pain and anxiety during pregnancy termination. *Int J Clin Exp Hypn*. 2010;**58**(1):82–101. doi: [10.1080/00207140903310865](#). [PubMed: [20183740](#)].
17. Marc I, Rainville P, Verreault R, Vaillancourt L, Masse B, Dodin S. The use of hypnosis to improve pain management during voluntary interruption of pregnancy: an open randomized preliminary study. *Contraception*. 2007;**75**(1):52–8. doi: [10.1016/j.contraception.2006.07.012](#). [PubMed: [17161125](#)].
18. Malamed S. Nondrug techniques: Iatrosedation and hypnosis, sedation (fifth edition). ; 2010. pp. 87–93.
19. Stubblefield PG. Control of pain for women undergoing abortion. 30, Supplement. ; 1989. pp. 131–40.
20. Imani F. Postoperative pain management. *Anesth Pain Med*. 2011;**1**(1):6–7. doi: [10.5812/aapm.1810](#).