



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



شبكة المعلومات الجامعية
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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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MONA MAGHRABY



Pain Relief during Unsedated Office Hysteroscopy by Applying Transcutaneous Electrical Nerve Stimulation: Randomized Controlled Trial

Thesis

*Submitted For Partial Fulfillment of Master Degree in
Obstetrics and Gynecology*

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2020

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سببنا أنك لا تعلم لنا
إلا ما علمتنا أنك أنت
العليم العظيم

صدق الله العظيم

سورة البقرة الآية: ٣٢

Acknowledgment

*First and foremost, I feel always indebted to **ALLAH**,
the Most Kind and Most Merciful.*

*I'd like to express my respectful thanks and
profound gratitude to **Prof. Dr. Hatem
Hussein El-Gamal**, Professor of Obstetrics and
Gynecology - Faculty of Medicine- Ain Shams
University for his keen guidance, kind supervision,
valuable advice and continuous encouragement,
which made possible the completion of this work.*

*I am also delighted to express my deepest
gratitude and thanks to **Dr. Mortada El-Sayed
Ahmed**, Assistant Professor of Obstetrics and
Gynecology, Faculty of Medicine, Ain Shams
University, for his kind care, continuous
supervision, valuable instructions, constant help
and great assistance throughout this work.*

*I would like to express my hearty thanks to all
my family for their support till this work was
completed.*

*Last but not least my sincere thanks and
appreciation to all patients participated in this
study.*

Ebtihal Sameih Ali Al-Nomany

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List of Abbreviations

Abb.	Full term
AUB	Abnormal uterine bleeding
CPPI	Chronic Prostatitis Pain Index
CPPS	Chronic Pelvic Pain Syndrom
DNC	Dorsal nerve of the clitoris
ECDU	Early Cancer Detection Unit
HF	Hypogastric fascia
HGF	Hypogastric fascia
HN	Hypogastric nerve emerges
HSG	Hysterosalpingography
ICM.....	Iliococcygeus
IHP	Inferior hypogastric plexus
<i>IRN</i>	Inferior rectal nerve
IRN	Inferior rectal nerve
IUA	Intrauterine adhesions or synechiae
IUCD	Intrauterine contraceptive device
IUI	Insemination
IVF	Vitro Fertilization
LAM	Levetor ani muscle
PAG	Periaqueductal gray
PCM.....	Pubococcygeus
PID	Pelvic inflammatory disease
PMB	Postmenopausal bleeding
<i>PN</i>	Pudendal nerve.
PnN.....	Perineal nerve

List of Abbreviations (cont...)

Abb.	Full term
PNS.....	Pudendal nerve stimulation
PRM	Puborectalis
PSN.....	Pelvic splanchnic nerves
PTNS	Percutaneous tibial nerve stimulation
SCS	Spinal cord stimulation
SHP.....	Superior hypogastric plexus
SNM	Sacral neuromodulation
SP	Sacral promontory
TENS	Transcutaneous electrical nerve stimulation
VAS.....	Visual analog scale
VPL	Ventral posterior lateral nuclei
VPM	Ventral posterior medial nuclei

INTRODUCTION

Hysteroscopy is a common, safe, feasible, minimally invasive and accurate procedure used to identify intracavitary uterine lesions, including increased endometrial thickness in postmenopausal women, suspected endometrial carcinoma, abnormal uterine bleeding, infertility, or recurrent pregnancy loss (*American College of Obstetricians and Gynecologists, 2011*).

It can be performed in an office setting; it does not require hospital admission, preoperative tests, and general or regional anesthesia, which has the benefit of increased safety and a low incidence of serious complications (*Ozturk et al., 2010*). Although it is generally well tolerated, pain, vagal syndrome, hypotension, and uneasiness are common among patients undergoing hysteroscopy (*McIlwaine et al., 2009*).

However, a major obstacle to its successful implementation as a common place procedure is pain management. A recent meta-analysis concluded that office-based hysteroscopy is painful (*Paulo et al., 2016*). Although most women tolerate it well, a sizeable number of hysteroscopies cannot be completed as a result of pain (*Ahmad et al., 2010*). One approach that has not yet been exhaustively explored for pain relief during office-based hysteroscopy is (TENS). It is noninvasive, safe, and inexpensive and, in addition, it has minimal side effects or drug interactions. It is

nonpharmacologic pain-relieving method based on the delivery of pulsed electrical currents through the skin, which reduces pain through both peripheral and central mechanisms (**Vance et al., 2014**).

It is effective in many variety of conditions, such as neuropathic pain, musculoskeletal pain, headache, gynecological and obstetric pain, to treat both chronic and acute pain, even from visceral organs (**Walsh et al., 2009**).

There are several studies show the role of TENS in gynecological and obstetric pain, result from randomized trial shows that TENS is an effective, reliable, practical and easily available modality of treatment for postpartum pain (**Seda Kayman-Kose, 2014**). There is some evidence from the recent randomized controlled trials that using TENS during labor does decrease pain and may increase maternal satisfaction. Most people who use TENS say that they would use it again in a future labor. There was also one recent randomized controlled trial that found that the use of TENS delayed or postponed the use of medications for pain relief (**Santana et al., 2016**).

Results from a randomized trial published in Obstetrics & Gynecology show that patients who received (TENS) during office-based hysteroscopy without sedation had less pain and higher patient satisfaction compared with a placebo group (**Lisón et al., 2017**).

Another published study show that in group which received TENS, women related significantly lower level of pain than patients which did not both during diagnostic hysteroscopy so TENS can relieve pain during office diagnostic hysteroscopy and may be an useful tool to reduce the burden of these procedures (*Cambiaghi et al., 2013*).