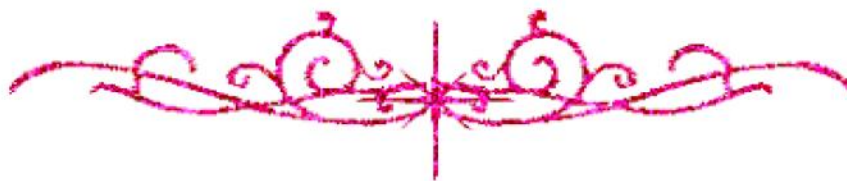


بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار





بعض الوثائق الأصلية تالفة





بالرسالة صفحات
لم ترد بالأصل





**Comparing Transcervical Intrauterine
Lidocaine Instillation with Rectal Diclofenac
for Pain Relief During Outpatient
Hysteroscopy: A Randomized Controlled Trial**

Thesis

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

By

Mohamed Ahmed Ismael Abozeid

(M.B.B.ch.)

Supervised by

Prof. Amro Salah El-Din El-Houssieny

*Professor of Obstetrics and Gynecology
Faculty of Medicine – Ain Shams University*

Dr. Haitham Abdel mohsen Sabba

*Assistant Professor of Obstetrics and Gynecology
Faculty of Medicine – Ain Shams University*

Dr. Heba Abdelbasset Allam

*Lecturer of Obstetrics and Gynecology
Faculty of Medicine – Ain Shams University*

*Faculty of Medicine
Ain Shams University*

2020

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سببنا انك لا تعلم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

صدق الله العظيم

سورة البقرة الآية: ٣٢

Acknowledgment

First and forever, thanks to **Allah**, Almighty for giving me the strength and faith to complete my thesis and for everything else.

I had great honor that my work under the supervision of **Prof/ Amro Salah El-Din El-Houssieny**. I would like to express my profound gratitude and sincere appreciation for his kind supervision, continuous encouragement and unlimited support in every step throughout this work.

I would like to express my deepest thanks and sincere appreciation to **Dr/ Haitham Abdel mohsen Sabba**, for his continuous support, great encouragement, great help, his patience and valuable advisement in every step throughout this work.

I would like also to thank **Dr/ Heba Abdelbasset Allam**, for her valuable advice and encouragement throughout this work.

Last but not least, I would like to express all my feelings of love and appreciation to all my senior staff and my colleagues their lovely help throughout this work.

 **Mohamed Ahmed Ismael Abozeid**

List of Contents

Title	Page No.
List of Abbreviations.....	i
List of Tables	ii
List of Figures	iii
Protocol	
Introduction	1
Aim of the Work.....	5
Review of Literature	
Outpatient Hysteroscopy	6
Pain Management for Outpatient Hysteroscopy.....	20
Local Anaesthesia for Office Hysteroscopy	33
Non-Steroidal Anti-Inflammatory Drugs in Gynecology.....	44
Materials and Methods	50
Results	58
Discussion	68
Study's Limitations	74
Conclusion	75
Summary	76
References	79
Arabic Summary	—

List of Abbreviations

Abb.	Full term
AUB	Abnormal uterine bleeding
BMI.....	Body mass index
BPT	Best practice tariffs
CI	Confidence Interval
ECDU	Early cancer detection unit
GA.....	General anaesthetic
HSG.....	Hysterosalpingogram
IMB.....	Intermenstrual bleeding
IQR	Interquartile range
IUD	Intrauterine device
LLETZ	Large loop excision of the transformation zone
MAC	Monitored anesthesia care
NSAIDs.....	Nonsteroidal anti-inflammatory drugs
OP	Outpatient
PASS.....	Power Analysis and Sample Size
PCB.....	Post coital bleeding
PMB	Postmenopausal bleeding
RCT.....	Randomized controlled trial
TENS	Transcutaneous electric nerve stimulation
TVUSS.....	Transvaginal ultrasound scan
VAS	Visual Analog Scale

List of Tables

Table No.	Title	Page No.
Table (1):	Indications for a diagnostic hysteroscopy.....	7
Table (2):	Indications for operative hysteroscopy	12
Table (3):	Risk and protective factors associated with pain perception during in-office hysteroscopy.....	22
Table (4):	Benefits of NSAIDs for specific gynecological diagnoses and the type of methodology used to establish efficacy.	45
Table (5):	The demographic and clinical characteristics of the included patients.....	58
Table (6):	The procedure characteristics of the included patients.....	60
Table (7):	The association between studied group and demographic characteristics.....	61
Table (8):	Association between studied group and complaints.	63
Table (9):	Association between studied group and findings.....	64
Table (10):	Association between studied group and pain score.	65
Table (11):	Correlation between studied variables and pain score	66
Table (12):	Association between pain score and complaint.....	66

List of Figures

Fig. No.	Title	Page No.
Figure (1):	Hysteroscopic polyp forceps.	13
Figure (2):	Hologic MyoSure morcellator device.....	14
Figure (3):	Hologic NovaSure endometrial ablation device.	15
Figure (4):	Pathway to hysteroscopy.....	19
Figure (5):	Hamou endomat infusion.	53
Figure (6):	Light source: Xenon nova by Storz.....	53
Figure (7):	Inner sheath with working channel for instruments use.....	54
Figure (8):	Camera by Storz.	54
Figure (9):	Telescope 30° size 5 mm.....	54
Figure (10):	Outer sheath oval shape, a traumatic blunt tip.	54
Figure (11):	The causes for undergoing OH.....	59
Figure (12):	Association between studied groups and age.....	62
Figure (13):	Association between studied groups and BMI.....	62
Figure (14):	Association between studied groups and complaint.....	63
Figure (15):	Association between studied groups and pain score.	65
Figure (16):	The correlation between pain score and age.....	66

INTRODUCTION

Outpatient hysteroscopy is an established diagnostic test that is in widespread use across the world. The procedure involves the use of miniaturized endoscopic equipment to directly visualize and examine the uterine cavity, without the need for formal theatre facilities or general or regional anesthesia. Outpatient hysteroscopy is indicated primarily in the assessment of women with abnormal uterine bleeding, but is also employed in the diagnostic work-up of reproductive problems (*van Dongen et al., 2009*).

More recently, advances in endoscopic technology and ancillary instrumentation have facilitated the development of operative hysteroscopic procedures in an outpatient setting with or without the use of local anesthesia. Common procedures include endometrial polypectomy, Removal of small submucous fibroids, endometrial ablation, Removal of lost intrauterine devices and transcervical sterilisation (*Litta et al., 2008*).

Outpatient hysteroscopy, whether diagnostic or operative, is successful, safe and well tolerated. However, as with any procedure requiring instrumentation of the uterus, outpatient hysteroscopy can be associated with significant pain, anxiety and embarrassment. This not only impacts upon women's satisfaction with their experience, but also limits the feasibility and possibly the safety, accuracy and effectiveness of the procedure. To minimize pain and discomfort, variations

in hysteroscopic equipment, adaptations to the technique and use of pharmacological agents have been advocated (*Sinha et al., 2007*).

Severe pain and patient anxiety are among the most common causes of surgical failure. Many anesthetic options are available to patients undergoing hysteroscopy. A Cochrane review supports the use of local anesthesia as effective pain control during and within 30 minutes of completing hysteroscopy (*Duffy et al., 2010*).

Conventional panoramic hysteroscopy requires some form of anesthesia, while the smaller caliber flexible hysteroscopes require little to no anesthesia. For hysteroscopes of larger diameter, injectable local anesthetics combined with preoperative vaginal misoprostol (Cytotec) is usually sufficient. Occasionally, regional anesthesia, monitored anesthesia care (MAC), or general anesthesia may be indicated for more extensive procedures or for patients who have lower pain tolerance and/or anxiety.

Many practitioners favor the use of topical anesthesia, although studies have shown mixed efficacy. Aerosolized preparations of lidocaine may decrease cervical pain from tenaculum placement but do not decrease uterine sensation. Additionally, a study comparing the addition of lidocaine with the saline distension media showed no difference in pain score compared with saline alone (*Shankar et al., 2004*).

In contrast, transcervical instillation of 5 mL of 2% mepivacaine lowered pain scores and decreased the rate of vasovagal reactions for women undergoing diagnostic hysteroscopy followed by endometrial biopsy. Topical anesthetics typically do not provide long-lasting relief but may be sufficient for the nonanesthetized woman (*Soriano et al., 2000*).

Infiltration of the paracervical tissue with a local anesthetic is commonly used for hysteroscopic anesthesia. A paracervical block can decrease the pain of tenaculum placement, cervical dilation, and hysteroscope insertion through the cervix. However, paracervical anesthesia has less effect on the pain of uterine distension. One must balance the expected pain of the hysteroscopic procedure with the pain and potential side-effects of the paracervical block, which include bradycardia and hypotension. For these reasons, many providers choose to forgo this step, especially for brief diagnostic procedures. Common anesthetic agents are 1% lidocaine, mepivacaine, prilocaine, ropivacaine, bupivacaine, and etidocaine. Of these, bupivacaine and etidocaine have longer durations and can last upwards of 2-3 hours (*Chudnoff et al., 2010*).

A recent study suggests that paracervical ropivacaine controls intraoperative pain slightly better than lidocaine during surgical abortions. In most cases, 10 mL of bupivacaine 0.25%, mepivacaine 1%, or lidocaine 1-2% is an adequate volume for paracervical anesthesia. If more volume is required,