AAGL 26

55TH GLOBAL CONGRESS ON MIGS

BOSTON, MASSACHUSETTS
NOVEMBER 13-16, 2026

Syllabus

Surgical Tutorial 425

Office Intrauterine Surgery: Optimizing the Patient Experience

HONORARY CHAIR
Charles H. Koh, MD

SCIENTIFIC PROGRAM CHAIR
Nash S. Moawad, MD

PRESIDENT
Michael Hibner, MD, PhD



Table of Contents

Course Program: Course Description, Learning Objectives, Course Outline 3

Financial Disclosures 4

When Routine Isn't Routine: Managing Pain in Special Instances and Vulnerable Patients
T. Singh 5

Basics of Uterine Neuroanatomy & Anesthesia Principles
M. Munro 10

Becoming a Low-Pain Surgeon (Instrumentation & Technique)
A. Di Spiezio Sardo 18

Cultural and Linguistic Competency & Implicit Bias 22

Surgical Tutorial 425
Office Intrauterine Surgery: Optimizing the Patient Experience

Chair: Tanvir Singh
Faculty: Attilio Di Spiezio Sardon Malcolm G. Munro, Tanvir Singh

Course Description

Reproductive surgery, including office diagnostic and operative hysteroscopy, fertility-preserving interventions, and endometriosis/adenomyosis surgery is increasingly performed in ambulatory settings. While surgical techniques have advanced, pain control remains one of the most influential determinants of a woman's overall experience, emotional wellbeing, and perception of autonomy in her care journey. Women undergoing these procedures often face heightened vulnerability to one or more of the various causes and contributors to chronic pain including endometriosis or adenomyosis, myofascial pain, and a host of other conditions. Frequently the pain is also contributed to by infertility-related stress, central sensitization, or prior negative healthcare encounters. These same women frequently report that their pain, anxiety, and concerns were not fully acknowledged—highlighting gaps in communication, counselling, and access to equitable, patient-centered analgesia. This course bridges these gaps by providing a multimodal, empowerment-focused framework for pain management in reproductive surgery. This course provides a structured framework to perform office hysteroscopic surgery safely, reproducibly, and with optimized patient comfort in awake women.

Learning Objectives: *At the end of this course, the participant will be able to:* 1) Stratify patients for office-based or operating room hysteroscopy; 2) Apply evidence-based analgesia and anxiolytic strategies for pain prevention; and 3) Perform low-pain surgical techniques for diagnostic and operative office hysteroscopy; and 4) Manage difficult scenarios.

Course Outline

11:30 am	Welcome, Introduction and Course Overview	T. Singh
11:35 am	When Routine Isn't Routine: Managing Pain in Special Instances and Vulnerable Patients	T. Singh
11:50 am	Basics of Uterine Neuroanatomy & Anesthesia Principles	M. Munro
12:05 pm	Becoming a Low-Pain Surgeon (Instrumentation & Technique)	A. Di Spiezio Sardo
12:20 pm	Discussion Questions & Answers	All faculty
12:30 pm	Adjourn	

ADA Statement: In accordance with the Americans with Disabilities Act (ADA), please contact CMEsupport@aagl.org should you require any special assistance.

Disclosure of Relevant Financial Relationships

As an ACCME-accredited provider, AAGL is responsible for ensuring that accredited education is fair, balanced, free of commercial bias, and supports safe, effective patient care. AAGL maintains control over all aspects of educational planning, content, faculty selection, delivery, and evaluation.

All individuals in a position to control educational content are required to disclose financial relationships with ACCME-defined ineligible companies within the past 24 months. AAGL identifies and mitigates all relevant financial relationships before individuals assume their respective roles. Educational content is also subject to independent peer review by individuals without relevant financial relationships.

Disclosure information and acknowledgment of any commercial support are provided to learners before the activity to promote transparency and maintain the independence and integrity of the education.

Asterisk (*) denotes no financial relationships with ACCME-defined ineligible companies to disclose.

PLANNER DISCLOSURES

The following members of AAGL have been involved in the educational planning and/or review of this course (listed in alphabetical order by last name).

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Linda Michels, AAGL Executive Director*
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Nancy Williams, COO, CME Consultants*

SCIENTIFIC PROGRAM COMMITTEE

Nash Moawad, MD, MS, Chairman – Consultant (ended 12/2024): Medtronic, Womed, Integra Life Sciences
Amani Harris, MD*
Ted Lee, MD – Advisory/Consultant: Johnson & Johnson, Regeneron Pharmaceuticals
Nucelio Lemos, MD, PhD – Speakers Bureau: Pfizer, Inc., Medtronic; Advisory Board: Knight Therapeutics, Vecfer Pharma
Mario Malzoni, MD*
Emad Mikhail, MD – Consultant: Johnson & Johnson
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Angela Chaudhari, MD - Consultant: Tag/Dream Medical, Johnson & Johnson; Speakers Bureau: Johnson & Johnson
Linda D. Bradley, MD, Medical Director*
Linda Michels, Executive Director, AAGL*

COURSE CHAIR DISCLOSURE

Tanvir Singh, MS*

FACULTY DISCLOSURES

The following faculty have agreed to support their presentations and clinical recommendations with the best available evidence from the medical literature (in alphabetical order by last name).

Attilio Di Spiezio Sardo, MD, PhD*
Malcolm G Munro, MD - Consultant: Flo Health, Rejoni Inc, Womed; Speakers Bureau: CSL-Vifor, Karl Storz, Phamacosmos; Stockholder: Rejoni Inc, Womed
Tanvir Singh, MS*

MITIGATION OF RELEVANT FINANCIAL RELATIONSHIPS

All relevant financial relationships have been mitigated.

Drs. Lee, Lemos, Mikhail, and Chaudhari's planning decisions, as part of the Scientific Program Committee (SPC), were peer reviewed by other planners on the SPC who had disclosed no financial relationships with ineligible companies, and found to be fair, balanced, and free of commercial bias. Dr. Moawad's financial relationships ended 12/2024, thus mitigating them. For most of his AAGL Professional Education Committee service, Dr. Mourad had no financial relationships to disclose. He recently disclosed a new relationship as a Proctor for Intuitive Surgical. Since then, he has not participated in activities involving control or influence over accredited educational content; therefore, no additional mitigation was necessary.

The presentation content for course faculty, Dr. Munro, has been peer reviewed and found to be fair, balanced, and free from commercial bias.

When Routine Isn't Routine: Managing Pain during office hysteroscopy In Special Instances And Vulnerable Patients

Tanvir Singh, MS · Tanvir Hospital/ Consultant

NOVEMBER 13-16, 2026 · BOSTON · #AAGL26

1

Disclosure

"I have no financial relationships to disclose."

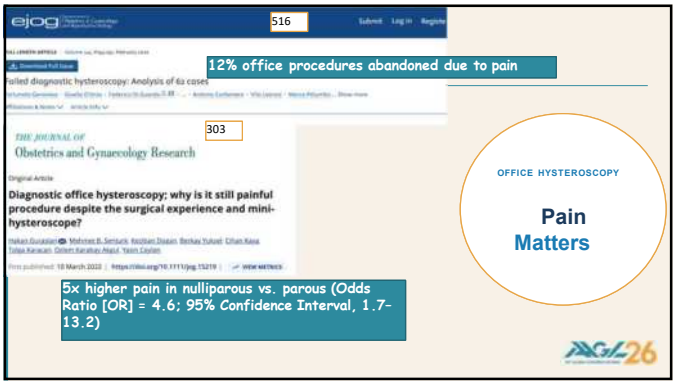
- Board Member of AAGL SIG Hysteroscopy (2026-2027)
- Involved in research trials- Astellas: 2693-CL-0315
-- Honorary Member of AGES (Australian Gynaecological Endoscopic Society)
- Consultant Veol Medical technologies

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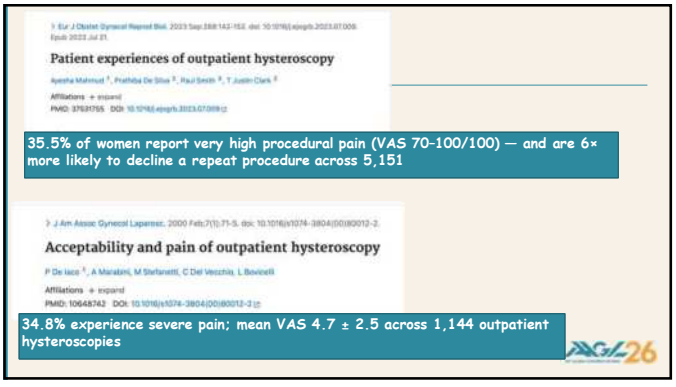
Objectives

- To identify vulnerable patients and special instances
- To explain how pain prevention can be done in vulnerable patients

3



4



5

Vulnerability

"the quality of being vulnerable (= able to be easily hurt, influenced, or attacked)"

- Cambridge Dictionary

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Vulnerability arises when three factors overlap:

The patient

The environment

The procedure

8

The patient

Factors associated with increased pain during office hysteroscopy

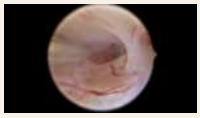
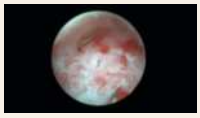
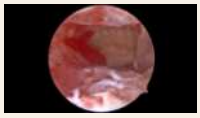
- nulliparity,no previous vaginal delivery
- High preprocedural anxiety
- Postmenopause
- Chronic pelvic pain/severe dysmenorrhoea
- Adolescence
- Prior vaginal delivery
- High preprocedural anxiety — directly associated with greater pain
- Vaginismus
- Previous painful or failed procedure

9

Factor	Reason for pain or less tolerance	Evidence	Interpretation
Nulliparity	Narrow cervix / cervical passage	previous vaginal delivery reduced VAS pain by approximately **1.99 points**	Increased pain risk
High preprocedural anxiety	Threat anticipation, sympathetic activation, muscle tension and pain amplification	Systematic review: 11 studies; 2,222 patients—anxiety adversely affected procedural pain. (2,3)	Increased pain risk
Postmenopause	Atrophy, reduced tissue elasticity and cervical stenosis may make access difficult	Cicinelli et al.: menopause was present in 72.5% of patients reporting pain versus 25.2% with no/minimal pain. Conversely, Rolim et al. found mean pain 5.5 versus 5.1 in premenopausal patients; p=0.258. (4,3)	Association is variable
Chronic pelvic pain	Central sensitization, visceral hyperalgesia and pelvic-floor guarding may amplify uterine and cervical stimuli	In a 533-patient prospective study, CPP was present in 29% of the pain group versus 0% of the no/minimal-pain group and remained an independent predictor. (4)	Increased risk
Severe dysmenorrhoea	May indicate heightened uterine nociception or visceral pain sensitivity	In 558 women, severe dysmenorrhoea increased the odds of unacceptable cramping at discharge approximately threefold: adjusted OR 3.07; 95% CI 1.97–4.78; p<0.001. (5)	Increased post-procedure pain risk
Adolescence	anxiety, and limited prior pelvic-examination experience may affect tolerance	No reliable hysteroscopy-specific pain percentage. ACOG identifies adolescents as a population whose pain-control and procedural-support needs may differ. (6)	Individualize; evidence gap
Vaginismus/pelvic-floor guarding	Involuntary muscle contraction may make vaginal entry, positioning and continued access painful or impossible	No robust hysteroscopy-specific statistic. RCOG flags severe pain during previous vaginal examinations or cervical screening when determining whether outpatient hysteroscopy is appropriate (7)	Tolerability/access concern; limited direct evidence
Previous sexual trauma	Risk of distress ot retraumatization	No validated percentage for increased VAS pain. ACOG and RCOG recommend trauma-informed counselling, explicit consent, individualized analgesia and alternative settings. (6,8)	limited evidence
Prior painful or failed procedure	Pain memory can increase anticipatory anxiety and guarding	RCOG identifies severe pain during previous vaginal examination as a reason to consider sedation or anaesthesia. Related evidence: previous D&C was associated with procedural pain, **OR 3.75; p=0.04**, with an estimated **79% probability of pain**—but D&C is not equivalent to a previous failed hysteroscopy. (9)	limited evidence

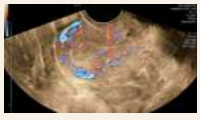
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The procedure

cervical resistance/stenosis

operative complexity and duration



uterine position



instrumentation

11

The environment

Inadequate preparation, limited analgesic choice, loss of control or failure to stop

"A difficult route is not the failure. Failing to warn, offer alternatives, or stop—that is the failure."

12

Key message

The patient is not the problem.
The pathway may be insufficient for her needs.

what should we do differently?

13

Understanding Pain Pathways

- Sympathetic Pathway T10-L1
  Travels via the **superior hypogastric plexus** → divides into 2 hypogastric nerves → innervates the **uterine fundus** via uterosacral ligament. Responsible for fundal and cornual pain.
- Parasympathetic Pathway S2-S4
  Forms the **uterovaginal plexus (Frankenhauser's)** → innervates the **cervix and lower uterine segment**. Target of paracervical block. Key for dilation and entry pain.
- Endometrial/Myometrial Stimulation
  Poorly understood innervation; uterine contractions from distension, biopsy, or ablation generate visceral cramp-like pain independent of cervical pathways.



Tenaculum placement — cervical laceration risk

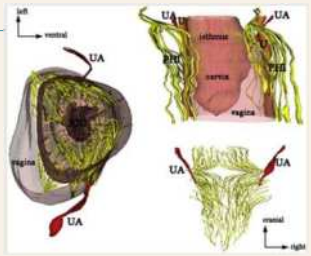
Cervical dilation — primary pain site in stenotic cervix

Uterine distension — intrauterine pressure-mediated pain

14

Nerve distribution

- Centripetal distribution from serosa to endometrium
- Dense innervation in the myometrium
- **Sparse in the endometrium**
- Dense in the endocervix Nerve distribution


UA
UA
UA

CALM

- C — Check anxiety and previous experiences
- A — Agree on analgesia, choices and alternatives
- L — Limit waiting, noise and unnecessary instrumentation
- M — Maintain control: pause signal, continuous consent and stop rule



Patient safety remains a Priority

19

Counselling

- VR for patient counselling (ANXIETY
- Pain management options in the office



20

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Review Article

Patients' Use of Virtual Reality Technology for Pain Reduction during Outpatient Hysteroscopy: A Meta-analysis of Randomized Controlled trials

Amerigo Vitagliano, MD, PhD, Miriam Dellino, MD, Alessandro Favilli, MD, PhD, Antonio D' Amato, MD, Pierpaolo Nicoli, MD, Antonio Simone Laganà, MD, PhD, Marco Noventa, MD, PhD, Mario Antonio Bochicchio, MD, PhD, Ettore Cicinelli, MD, PhD, and Gianluca Raffaello Damiani, MD

active VRT potentially reduced the perception of pain (MD 1. whereas passive VRT had no effect (MD 0.06,95%CI 1.15to1

21

Virtual Reality Educational Tool for Pre-Procedural Anxiety Reduction in Office Hysteroscopy: A Retrospective Cohort Study

VR Intervention vs. Standard of Care — Single-Centre Experience (N=327)

STUDY DESIGN
Retrospective Cohort

SETTING
Single-Centre Office Hysteroscopy

TOTAL PATIENTS
N = 327

STATUS
Manuscript writing 2026

Unpublised data

22

Primary Outcome	Secondary Outcome	Complex pathology	Procedural Success
p<0.001	**2 of 4**	**OR 5.7**	**98%+**
VR significantly reduced pre-procedural anxiety (median 1.0 vs 2.0; r=0.303, medium effect).	VR improved VAS Pain (p=0.039) and Procedure Time (p=0.002); Satisfaction and Success were equally high in both groups.	**Adenomyosis was the strongest predictor of anaesthesia** need (OR=5.66, p=0.001); cervical stenosis impacted pain, PT, and anaesthesia. Adenomyosis prevalence: 7.0% (23/327).	Success rates exceeded 98% in both groups, confirming the safety and feasibility of office hysteroscopy at this centre.

Instrument:
Truclear 64.2%,
Mechanical 31.7%,
Mini-Resectoscope 3.8%

Anaesthesia type (when used):
Paracervical Block 76.7%,
Entonox 16.7%,
IV Sedation 6.7%

23

Secondary outcome

VAS Pain (median)	2.0	3.0	0.039*
Procedure Time (mean, min)	10.94 ± 5.24	13.80 ± 7.72	0.002*
Satisfaction (median, 0–5)	5.0	5.0	0.585
Anaesthesia Required	11.8%	10.8%	0.952
Procedural Success	98.2%	97.8%	1.000

24

Key takeaways

Identify Vulnerability Before the Procedure

Multimodal Analgesia is the Standard

Technique is the First Line of Pain Management

STOP rule

25

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26

Office Intrauterine Surgery: Optimizing the Patient Experience

Basics of Uterine Neuroanatomy & Anesthesia Principles

Malcolm G. Munro MD, FACOG, FRCSC, FRCOG (ad eundem)

- Chair, Women's Health Research
- Co-Founder FIGO's Committee on Menstrual Disorders & Related Health Impacts
- Clinical Professor, Division of Complex Benign Gynecology
- Department of Obstetrics & Gynecology
- David Geffen School of Medicine at UCLA

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1

Disclosures: Malcolm G. Munro

- Speaker for:
  - Karl Storz Endoscopy Americas
  - Pharmacosmos
  - CSL Vifor
- Stockholder Options:
  - Rejoni LLC
  - Womed
- Consultant
  - Rejoni Inc
  - Womed
  - Flo Health

2

Objectives

- Describe basic uterine neuroanatomy
- Summarize the pharmacokinetics of local anesthetic agents and factors to consider regarding their optimal use and safety
- Describe the various local anesthetic techniques and related supporting evidence for the provision of uterine anesthesia

3







- 60 yo
- Postmenopausal bleeding
- Hysteroscopy performed in an "office"
- Multiple procedures
- No anesthesia
- Endometrial polyp
- Chemical cautery
- Symptoms resolved

The 19th Century
Evolution of the Endoscope

Diomede Pantaleoni 1818-1885

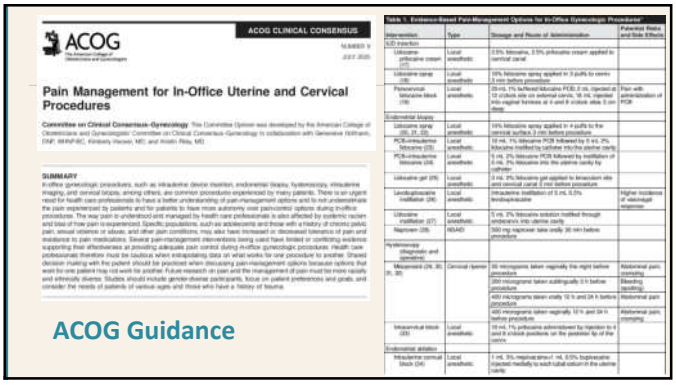
...and the first published description of hysteroscopic surgery

Pantaleoni DC: On endoscopic examination of the cavity of the womb. Med Press 1869;8:26

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6

Local Anesthesia for Intrauterine Surgery

As a patient, would you rather have pain control, or prevention of pain?

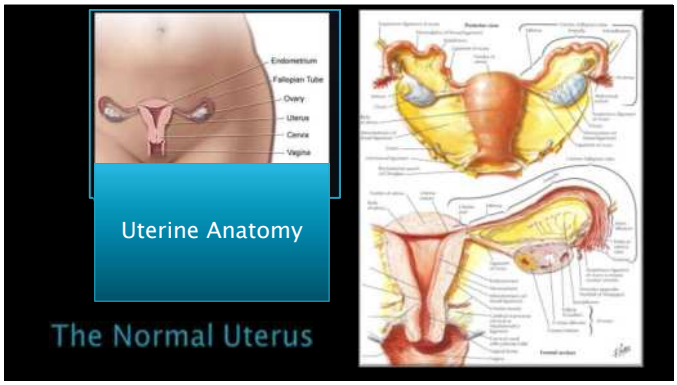
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Local Anesthesia for Hysteroscopy & Intrauterine Surgery

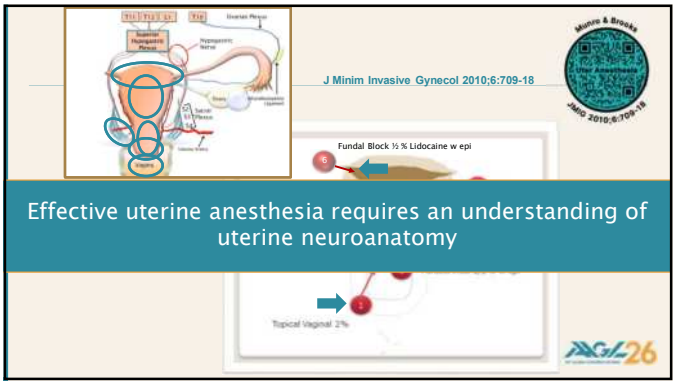
Agenda

- Describe basic uterine neuroanatomy
- List the targets for local anesthesia
- Understand local anesthesia pharmacokinetics
- See a published, effective protocol that considers each of these targets
- Describe non-anesthetic measures to improve the patient experience

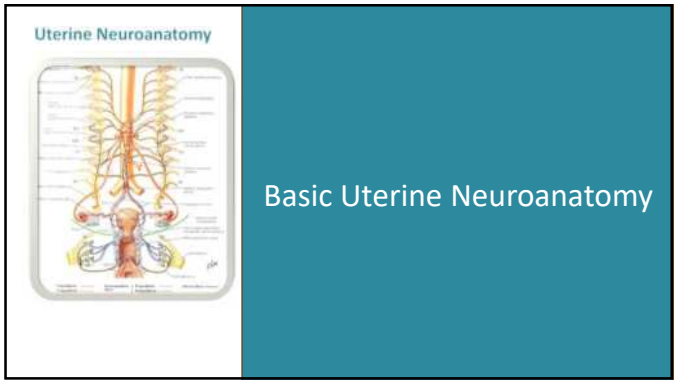
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11

Uterine Neuroanatomy

Endometrial Innervation

High density of small nerve fibres in the functional layer of the endometrium in women with endometriosis

N. Tokushige[1,2], R. Markham[1], P. Russell[2] and I.S. Fraser[3]

12

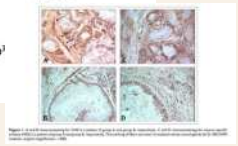
Uterine Neuroanatomy

Endometrial Innervation

Original Article

The Potential Role of Endometrial Nerve Fibers in the Pathogenesis of Pain During Endometrial Biopsy at Office Hysteroscopy

Attilio Di Spiezio Sardo, PhD, MD[1], Pasquale Florio, PhD, MD[2], Loredana Maria Sosa Fernandez, MD[1], Germano Guerra, MD, PhD[1], Marialuigia Spinelli, MD[1], Costantino Di Carlo, MD, PhD[1], Marco Filippeschi, MD[2], and Carmine Nappi, MD[1]

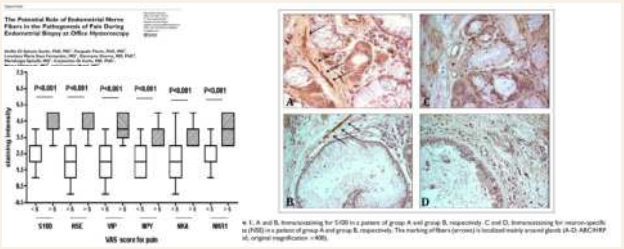


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Uterine Neuroanatomy

Endometrial Innervation



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Local Anesthesia for Hysteroscopy & Intrauterine Surgery

Agenda

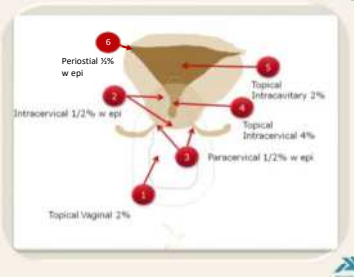
- Describe basic uterine neuroanatomy
- List the targets for local anesthesia
- Understand local anesthesia pharmacokinetics
- See a published, effective protocol that considers each of these targets
- Describe non-anesthetic measures to improve the patient experience

15

15

Uterine Local Anesthesia – Sites to consider

- Vagina
- Cervix
  - Intracervical
  - Topical
- Corpus
  - Paracervical
  - Topical
  - Fundal

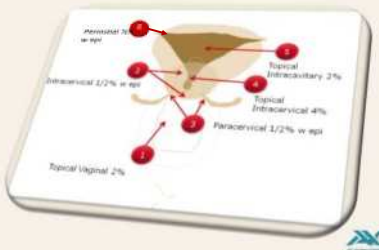


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Uterine Local Anesthesia – Sites to consider

- Vagina
- Cervix
  - Intracervical
  - Topical
- Corpus
  - Paracervical
  - Topical
  - Fundal



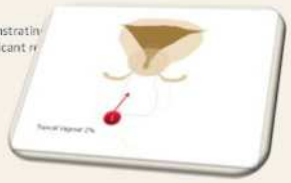
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Uterine Local Anesthesia – Sites to consider

1. Topical Vaginal

- Available data
- RCT from the brachytherapy literature demonstrati
- Double blinded RCT "EMLA" vs placebo signific



1. *Chen HC et al. Local vaginal anesthesia during high-dose-rate intracavitary brachytherapy for cervical cancer. Int J Radiat Oncol Biol Phys. 1998 Oct 1;42(3):541-4
2. Keskin et al. Topical anesthetic cream application before speculum examination in postmenopausal women. J Minim Invasive Gynecol 2012;19:350-5

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Uterine Local Anesthesia – Sites to consider

2. Intracervical (Deep Intracervical)

- Some trials but inconsistent injection-procedure time
- Demonstrated effective for resectoscopic end



Ferry J, Rankin L. Aust N Z J Obstet Gynaecol. 1994 Aug;34(4):457–61.

Broadbent JA, et al. Br J Obstet Gynaecol. 1992 Sep;99(9):777–9.

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Uterine Local Anesthesia – Sites to consider

3. "Paracervical" (Uterosacral Cardinal± Broad Ligament

- Several RCTs but inconsistent:
  - concentration
  - volume
  - location
  - injection-procedure time



No difference

•Vercellini P t al. Fertil Steril. 1994 Nov;62(5):1083–5.
•Lau WC et al. Br J Obstet Gynaecol. 1999 Apr;106(4):356–9.

Significant difference

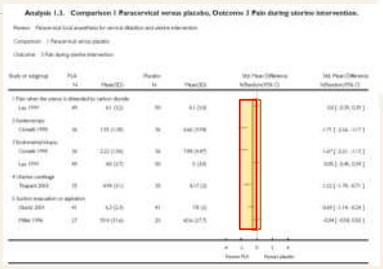
•Cicinelli E. J Reprod Med. 1998 Dec;43(12):1014–8.
•Titapant V et al. J Med Assoc Thai. 2003 Feb;86(2):131–5.
•Giorda G et al.. Acta Obstet Gynecol Scand. 2000 Jul;79(7):593–7
•Chudnoff et al. Obstet Gynecol 2010 ;115:26–34
•Mody et al Obstet Gynecol 2018;132:575–82 (IUD, 20 mL 1%, tenaculum site, no time described)

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Uterine Local Anesthesia – Sites to consider

3. Paracervical





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Uterine Local Anesthesia – Sites to consider

4. Topical intracervical

- Two RCTs demonstrate significantly reduced pain
- One showed no difference



No difference

•Davies A et al.. Fertil Steril. 1997 Jun;67(6):1019–23

Significant difference

- Soriano D et al. Obstet Gynecol. 2000 Nov;96(5 Pt 1):661–4.
- Zullo F et al.. J Reprod Med. 1999 Oct;44(10):865–9.

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Uterine Local Anesthesia – Sites to consider

5. Topical Intracavitary

- Most RCTs show significant difference
- One showed no difference



No difference

•Lau WC et al. BJOG. 2000 May;107(5):610–3.

Significant difference

•Costello M et al. Gynaecol Endoscopy. 1998;7:121–6.
•Zupi E et al. Fertil Steril. 1995 Feb;63(2):414–6.
•Cicinelli E et al.. Br J Obstet Gynaecol. 1997 Mar;104(3):316–9.
•Agdi & Tulandi Gynecol Obstet Invest 2010 68:30–2

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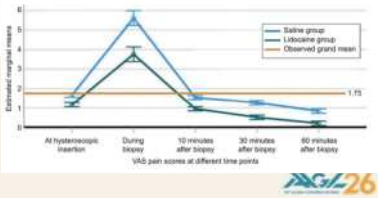
Original Research

Intrauterine Lidocaine Instillation and Pain Scores Among Women Undergoing Hysteroscopy-Guided Biopsy

A Randomized Controlled Trial

Aishwarya Thalappan Puliyullaveettil, MS, Murali Subhaiah, MS, Chitra Thyagaraju, DNB, and Divya Bhuleya, MS

CLINICAL TRIAL REGISTRATION: Clinical Trials Registry India (CTRI), CTRI/2021/07/034679.
(Obstet Gynecol 2025;146:279–84)
DOI: 10.1097/AOG.0000000000005972



- 5 mL 2% lidocaine
- Speculum and catheter
- 5 minutes before hysteroscopy
- Vaginoscopic access

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Systemic Analgesia

- One RCT has demonstrated that 500 mg of mefenamic acid was associated with reduced posprocedure pain, compared to placebo

◦Nagele F et al.. Br J Obstet Gynaecol. 1997 Jul;104(7):842–4.

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Local Anesthesia for Hysteroscopy & Intrauterine Surgery

Agenda

- Describe basic uterine neuroanatomy
- List the targets for local anesthesia
- Understand local anesthesia pharmacokinetics
- See a published, effective protocol that considers each of these targets
- Describe non-anesthetic measures to improve the patient experience

26

26

Local Anesthesia & Office Intrauterine Procedures

Variables to Consider

- Patient anxiety
- Baseline cervical dilation
- Instrument (eg hysteroscope sheath) caliber
- Procedure being performed
  - Duration
  - Dissection
  - Distention of the endometrial cavity
- Coexisting disease/disorders
  - Endometriosis
  - Vaginitis
  - Hypotrophic vagina

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Classification of local anesthetic agents

- **Amides**
  - Lidocaine (Xylocaine)
  - Bupivacaine (Marcaine)
  - Mepivacaine (Carbocaine)
  - Prilocaine (Citanest)
  - Etidocaine (Duranest)
- **Esters (Contain PABA)**
  - Procaine (Novocain)
  - Chloroprocaine (Nesacaine)
  - Tetracaine (Pontocaine)

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Injectable Local Anesthesics

Anesthetic	Concentration	Onset (min)	Duration (hours)	Maximal Dose (mg / kg)	Maximum Dose (mL /70 kg)
Lidocaine (Xylocaine®)	1%, 2%	<2	1.5–2	4 mg/kg not to exceed 280 mg	28mL (1%); 14 mL (2%)
Mepivicaine (Carbocaine®)	1%	3–5	0.75–1.5	4 mg/kg not to exceed 280 mg	28 mL
Prilocaine (Citanest®)	1%	<2	>1	7 mg/kg not to exceed 500 mg	50 mL
Lidocaine with Epinephrine	Lidocaine 0.5%, 1%, 2% Epinephrine 1:100,000; 1:200,000	<2	2–6	7 mg/kg not to exceed 500 mg	100 mL (0.5%) 50 mL (1%) 25 mL (2%)
Bupivicaine (Marcaine®)	0.25%	5–8	2–4	2.5mg/kg not to exceed 175 mg	50 mL
Etidocaine (Duranest®)	0.25 , 1%	4–6	2–3	4 mg/kg not to exceed 300 mg	50 mL (0.5%) 25 mL (1%)

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Topical Local Anesthetics

Anesthetic Formulation	Onset	Duration	Complications
0.5%, Tetracaine, 1:2,000 Epinephrine, 11.8% Cocaine (TAC®)	10–30 min	Unknown	Rare severe toxicity including seizures and sudden cardiac death
4% Lidocaine, 1:2,000 Epinephrine, 0.5% Tetracaine (LET®)	20–30 min	Unknown	No severe adverse reactions reported
2.5% Lidocaine, 2.5% Prilocaine (EMLA®)	1 hour	0.5 – 2 hours	Contact dermatitis, methemoglobinemia (very rare)
4% Liposomal Lidocaine	0.5 hour	0.5 – 2+ hours	No severe adverse reactions reported

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Factors impacting injectable local anesthetic effect

Onset, Potency & Duration of Action

- pKa of the agent
  - Closer to local pH, greater the penetration into the nerve
- Lipophilic properties
  - Increased lipophilia associated with more rapid penetration
- Local vasoconstriction
  - Vasodilation promotes vascular absorption, reduces concentration, reduces duration
- Protein binding
  - Greater protein binding, longer anesthetic effect
- Nerve diameter
  - Larger nerve, slower the onset

31

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Technical steps to optimization of effect

Onset, Potency & Duration of Action

- pKa of the agent
  - Add epinephrine or Na+ bicarbonate to increase local pH
- Lipophilic properties
  - Topical liposomal lidocaine
- Local vasoconstriction
  - Add epinephrine
- Protein binding
  - Lidocaine preferable
- Nerve diameter
  - Allow sufficient time considering larger diameter nerves

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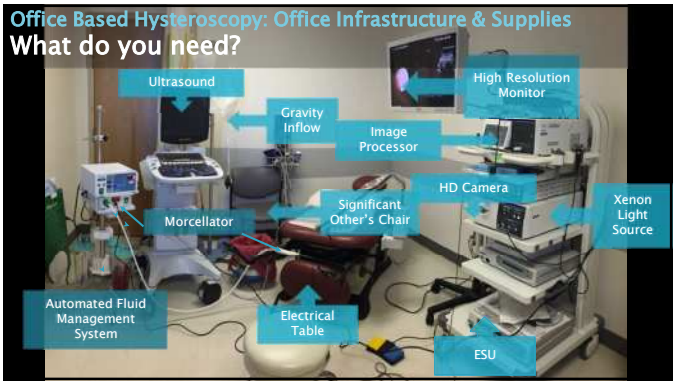
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Local Anesthesia for Hysteroscopy & Intrauterine Surgery

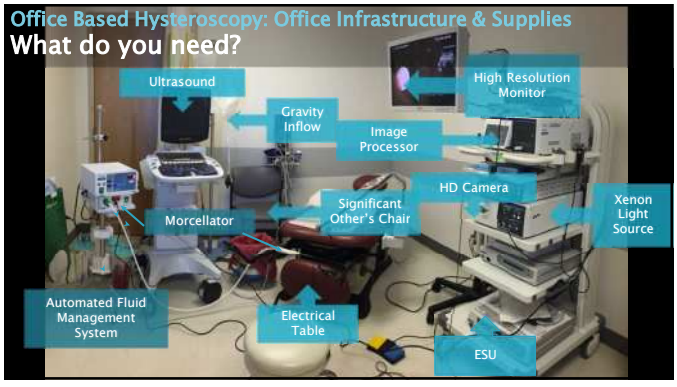
Agenda

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- Understand local anesthesia pharmacokinetics
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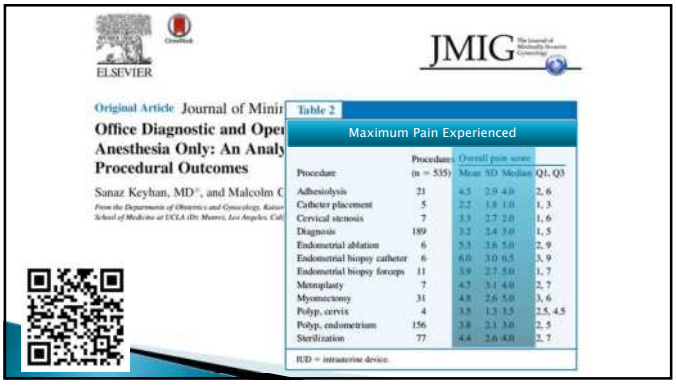
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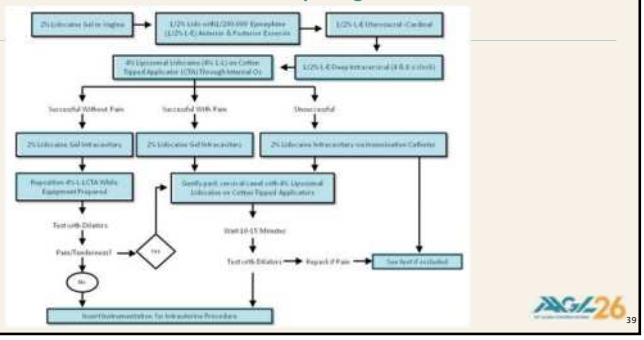
LOCAL ANESTHESIA
FOR
INTRAUTERINE PROCEDURES

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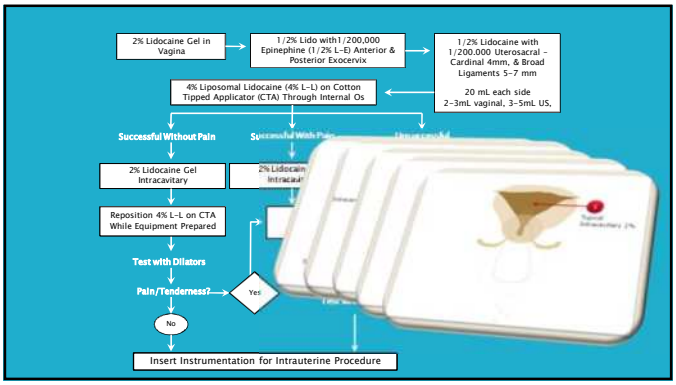


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Uterine Anesthesia: Technique algorithm



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Local Anesthesia for Hysteroscopy & Intrauterine Surgery

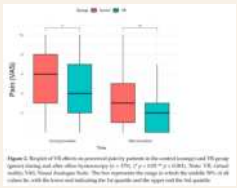
Agenda

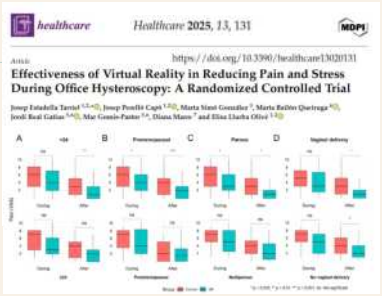
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Non Medical Interventions

Virtual Reality

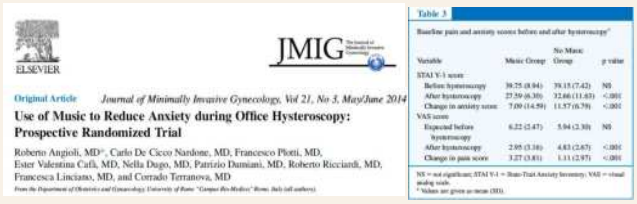




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Non-Medical Interventions

Music



ELSEVIER JMIG

Original Article *Journal of Minimally Invasive Gynecology, Vol 21, No 3, May/June 2014*

Use of Music to Reduce Anxiety during Office Hysteroscopy: Prospective Randomized Trial

Roberto Angioli, MD*, Carlo De Cicco Nardone, MD, Francesco Plotti, MD, Ester Valentina Cafà, MD, Nella Dugo, MD, Patrizio Damiani, MD, Roberto Ricciardi, MD, Francesca Linciano, MD, and Corrado Terranova, MD

From the Department of Obstetrics and Gynaecology, University of Rome "Campus Bio-Medico", Rome, Italy (all authors).

Table 3

Baseline pain and anxiety scores before and after hysteroscopy*

Variable	Music Group	No Music Group	p value
STAI Y-1 score			
Before hysteroscopy	36.75 (8.94)	39.15 (7.42)	NS
After hysteroscopy	27.39 (6.30)	32.66 (11.63)	<.001
Change in anxiety score	7.09 (14.59)	11.57 (6.79)	<.001
VAS score			
Expected before hysteroscopy	6.22 (5.47)	5.94 (2.30)	NS
After hysteroscopy	2.95 (3.16)	4.83 (2.67)	<.001
Change in pain score	3.27 (3.81)	1.11 (2.97)	<.001

NS = not significant; STAI Y-1 = State-Trait Anxiety Inventory; VAS = visual analog scale.
* Values are given as mean (SD).

Who is appropriate for office-based hysteroscopic intrauterine surgery

- Everyone?
- There are few exceptions:
  - Lack of access to appropriate instrumentation and supplies
  - Concerns about ability to perform the procedure
  - Requirement for simultaneous laparoscopy or other procedures that require institutional OR or MAC/Regional/General anesthesia
  - Failure to complete in an office setting
  - Concerns about patient's ability to tolerate including suspected allergy to anesthetic agents

References

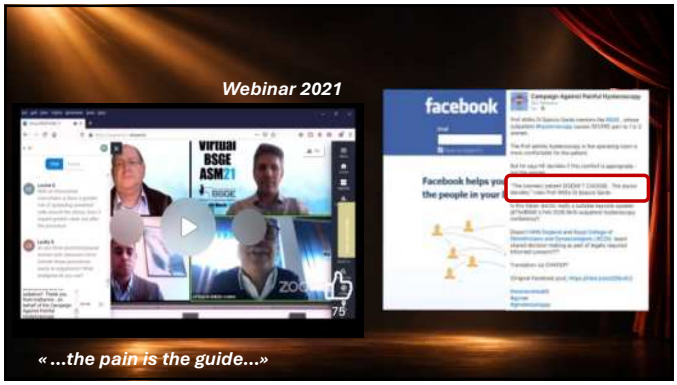
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- Chudnoff et al. Obstet Gynecol 2010 ;115:26-34.
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AAGL26
55TH GLOBAL CONGRESS ON MIGS
November 13-16, 2026 | Boston | #AAGL26
BECOMING A LOW-PAIN SURGEON
Instrumentation & Technique
Attilio Di Spiezio Sardo
University of Naples Federico II

1


Can the same instrument cause pain or create harmony?

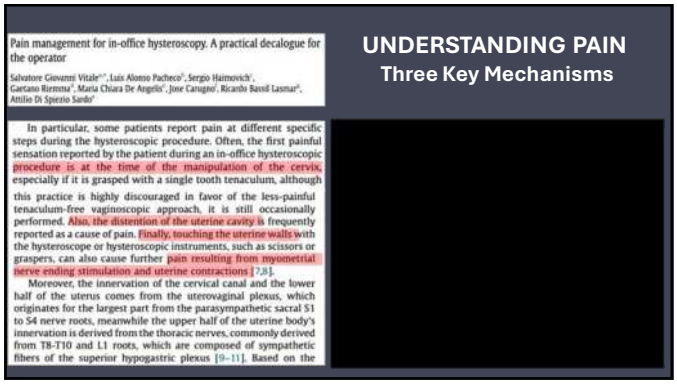
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Webinar 2021
Virtual BSGE ASM21
facebook
« ...the pain is the guide...»

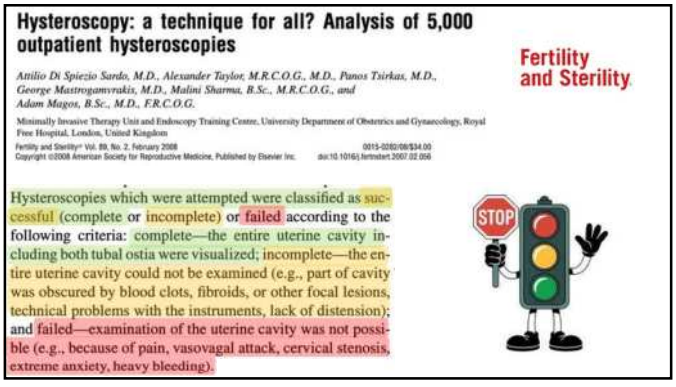
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« ...the pain is the guide...»
Appropriate counselling and the help of «Vocal Local Anesthesia»

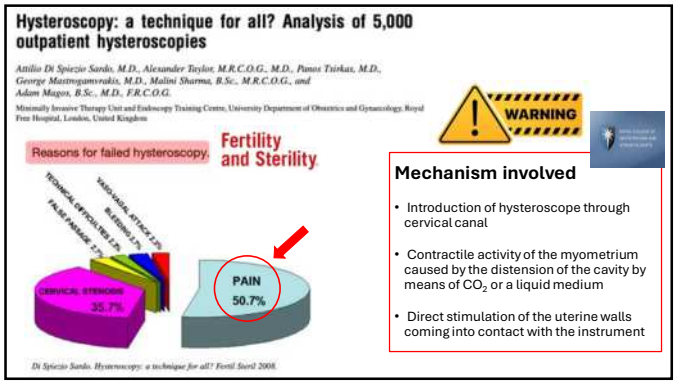
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Pain management for in-office hysteroscopy. A practical decalogue for the operator
UNDERSTANDING PAIN
Three Key Mechanisms

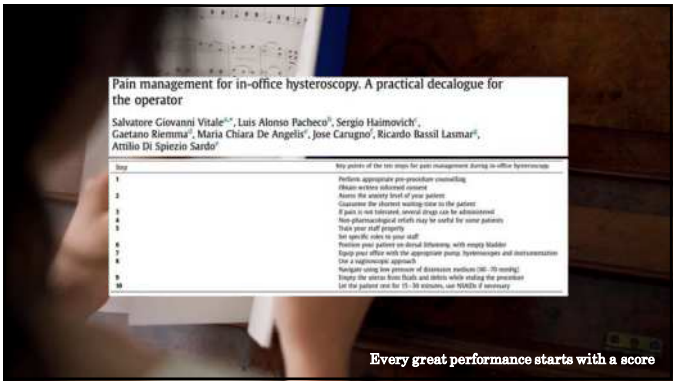
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Hysteroscopy: a technique for all? Analysis of 5,000 outpatient hysteroscopies
Fertility and Sterility
STOP

6


Hysteroscopy: a technique for all? Analysis of 5,000 outpatient hysteroscopies
Attilio Di Spiezio Sardo, M.D., Alexander Taylor, M.R.C.O.G., M.D., Panos Tsirkas, M.D., George Mastrogamvrakis, M.D., Malini Sharma, B.Sc., M.R.C.O.G., and Adam Magos, B.Sc., M.D., F.R.C.O.G.
Minimally Invasive Therapy Unit and Endoscopy Training Centre, University Department of Obstetrics and Gynaecology, Royal Free Hospital, London, United Kingdom
Reasons for failed hysteroscopy
Fertility and Sterility
WARNING
CERVICAL STENOSIS 35.7%
PAIN 50.7%
Mechanism involved
• Introduction of hysteroscope through cervical canal
• Contractile activity of the myometrium caused by the distension of the cavity by means of CO_2 or a liquid medium
• Direct stimulation of the uterine walls coming into contact with the instrument
Di Spiezio Sardo. Hysteroscopy: a technique for all? Fertil Steril 2008.

7


Pain management for in-office hysteroscopy. A practical decalogue for the operator
Salvatore Giovanni Vitale, Luis Alonso Pacheco, Sergio Haimovich, Gaetano Riemma, Maria Chiara De Angelis, Jose Carugno, Ricardo Bassil Lasmar, Attilio Di Spiezio Sardo
Every great performance starts with a score

8


Communicate · Reassure · Prepare
Perform appropriate pre-procedure counselling
Obtain written informed consent
Assess the anxiety level of your patient
Guarantee the shortest waiting-time to the patient

9


Pharmacological and non-pharmacological pain relief for office hysteroscopy: an up-to-date review.
Riemma G, Schiattarella A, Colacurci N, Vitale SG, Cianci S, Cianci A, De Franciscis P.
Climacteric. 2020 Aug;23(4):376-383. doi: 10.1080/13697137.2020.1754388. Epub 2020 May 12.
VOCAL LOCAL
Non-pharmacological reliefs may be useful for some patients

10


FACTS, VIEWS & VISION in ObGyn
2025
The impact of virtual reality technology in the era of See & Treat hysteroscopy: a randomised controlled trial
Non-pharmacological reliefs may be useful for some patients

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Train your staff properly
Set specific roles to your staff

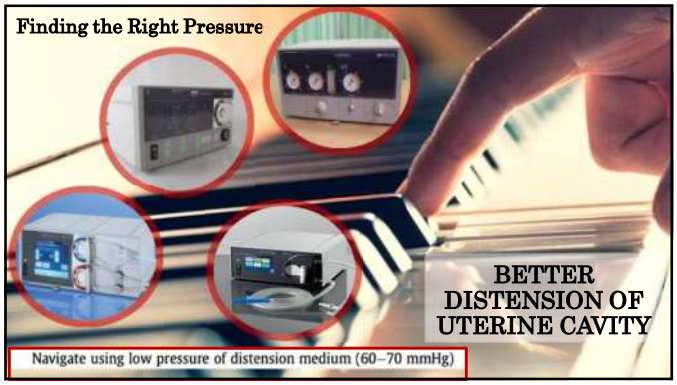
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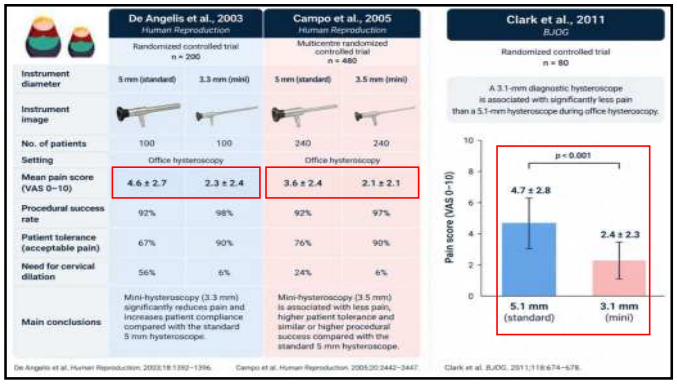
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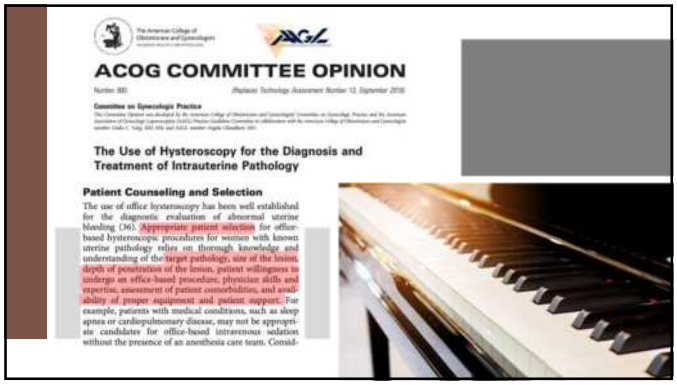
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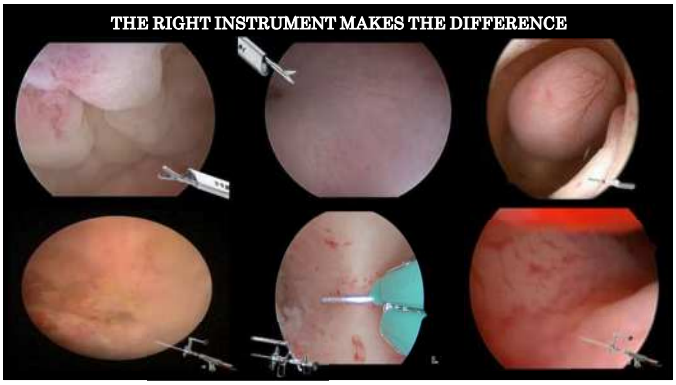
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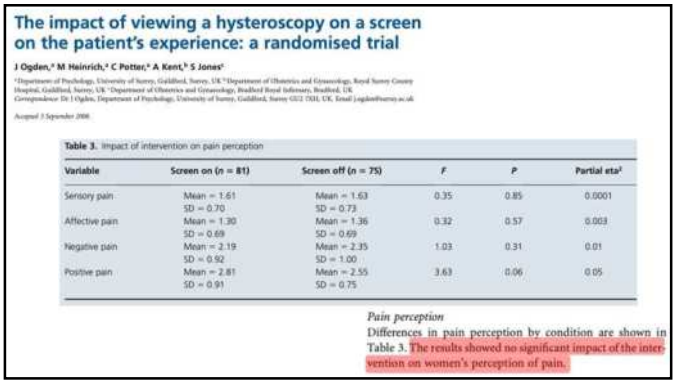
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CULTURAL AND LINGUISTIC COMPETENCY & IMPLICIT BIAS

The California Medical Association (CMA) outlines standards for Cultural Linguistic Competency and Implicit Bias in CME. The goal of the standards is to support the role of accredited CME in advancing diversity, health equity, and inclusion in healthcare. These standards are relevant to ACCME-accredited, CMA-accredited, and jointly accredited providers located in California. AAGL is ACCME-accredited and headquartered in California.

CMA developed the standards in response to California legislation (Business and Professions (B&P) Code Section 2190.1), which directs CMA to draft a set of standards for the inclusion of cultural and linguistic competency (CLC) and implicit bias (IB) in accredited CME.

The standards are intended to support CME providers in meeting the expectations of the legislation. CME provider organizations physically located in California and accredited by CMA CME or ACCME, as well as jointly accredited providers whose target audience includes physicians, are expected to meet these expectations which began on January 1, 2022. AAGL has been proactively adopting processes that meet and often exceed the required expectations of the legislation.

CMA CME offers a variety of resources and tools to help providers meet the standards and successfully incorporate CLC & IB into their CME activities, including FAQ, definitions, a planning worksheet, and best practices. These resources are available on the CLC and IB standards page on the CMA website.

Important Definitions:

Cultural and Linguistic Competency (CLC) – The ability and readiness of health care providers and organizations to humbly and respectfully demonstrate, effectively communicate, and tailor delivery of care to patients with diverse values, beliefs, identities and behaviors, in order to meet social, cultural and linguistic needs as they relate to patient health.

Implicit Bias (IB) – The attitudes, stereotypes and feelings, either positive or negative, that affect our understanding, actions and decisions without conscious knowledge or control. Implicit bias is a universal phenomenon. When negative, implicit bias often contributes to unequal treatment and disparities in diagnosis, treatment decisions, levels of care and health care outcomes of people based on race, ethnicity, gender identity, sexual orientation, age, disability and other characteristics.

Diversity – Having many different forms, types or ideas; showing variety. Demographic diversity can mean a group composed of people of different genders, races/ethnicities, cultures, religions, physical abilities, sexual orientations or preferences, ages, etc.

Direct links to AB1195 (CLC), AB241 (IB), and the B&P Code 2190.1:

Bill Text – AB-1195 Continuing education: cultural and linguistic competency.
Bill Text – AB-241 Implicit bias: continuing education: requirements.
Business and Professions (B&P) Code Section 2190.1

CLC & IB Online Resources:

Diversity-Wheel-as-used-at-Johns-Hopkins-University-12.png (850×839) (researchgate.net)
Implicit Bias, Microaggressions, and Stereotypes Resources | NEA
Act, Communicating, Implicit Bias (racialequitytools.org)
https://www.contemporaryobgyn.net/view/overcoming-racism-and-unconscious-bias-in-ob-gyn
https://pubmed.ncbi.nlm.nih.gov/34016820/
https://hr.ucdavis.edu/departments/learning/certificate/implicit-bias
https://pmc.ncbi.nlm.nih.gov/articles/PMC7011228/