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GYNECOLOGIE
OBSTÉTRIQUE

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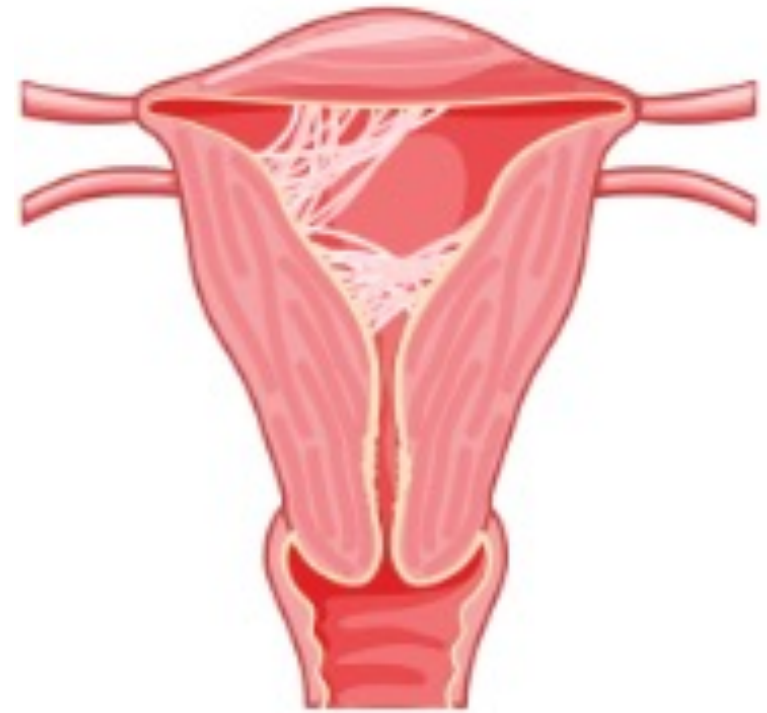


Management des manœuvres endo- utérines et prévention des synéchies

Pr Bechir Zouaoui
Dr. Khaoula Magdoud

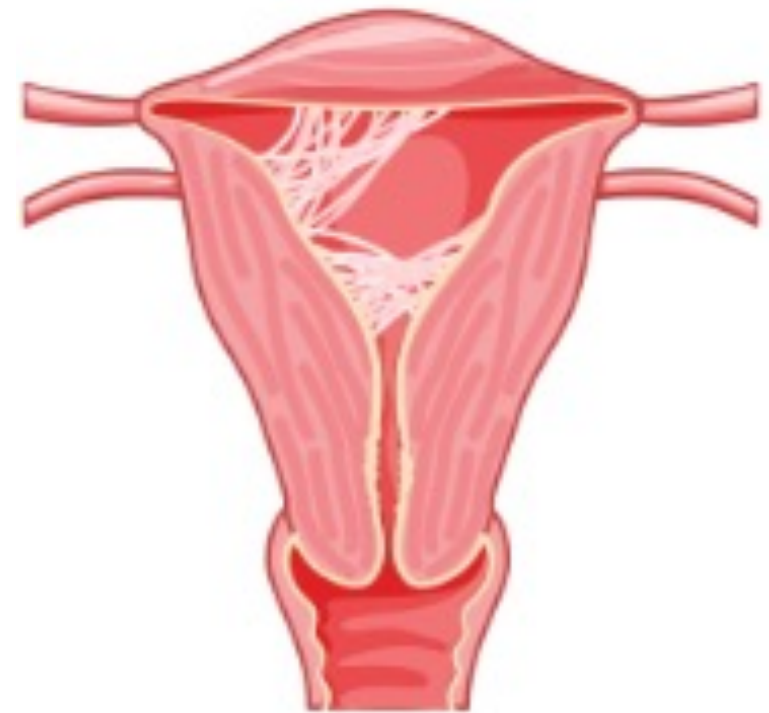
Introduction

- Décrite la première fois par Asherman en 1894
- Prévalence: 1.5% à 21.5 %
- Clinique : aménorrhée, infertilité, FCS, douleur pelvienne
- Étiopathologie: agression endométriale
- Récidive après cure de synéchie : 30 à 66%
- Prévention: primaire / secondaire

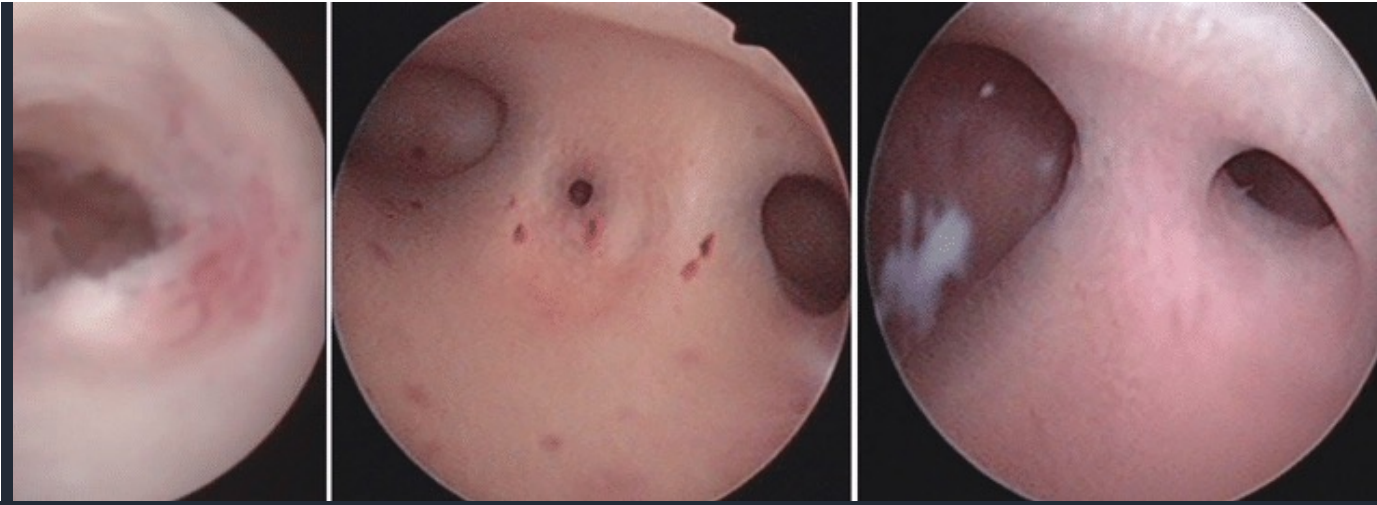


Plan

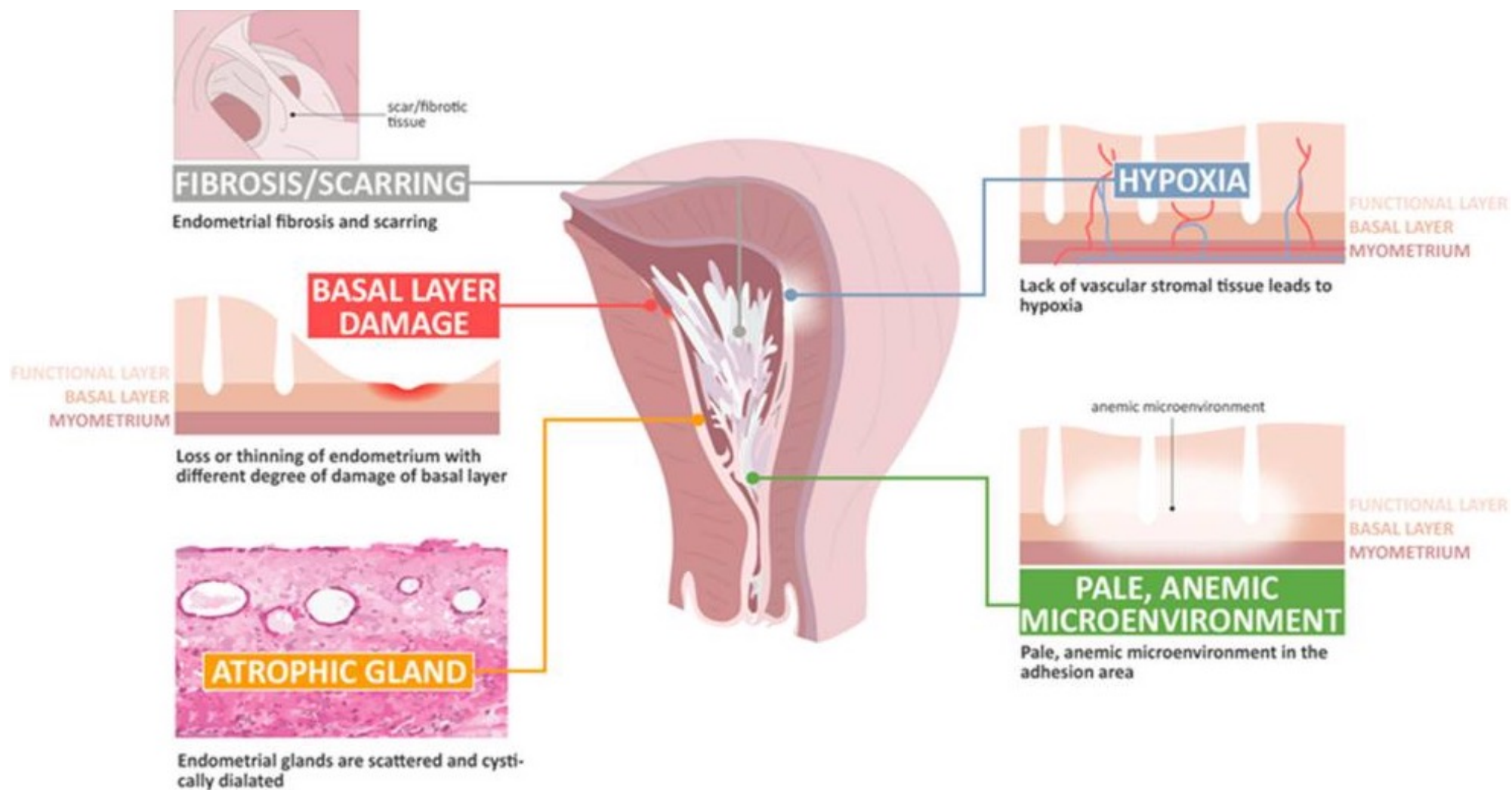
- ✓ Définition/Classification
- ✓ les manœuvres endo-utérines à risque de synéchie
- ✓ Prévention: primaire/ secondaire



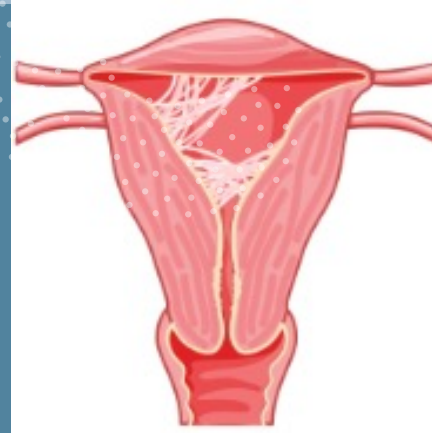
Définition



- Ponts **fibreux** anormaux à l'intérieur de la cavité utérine
- Processus **cicatriciel** anormal



Symptômes cliniques



**Amenorrhea/
Spotting**

**Dysmenorrhea/
Pelvic pain**

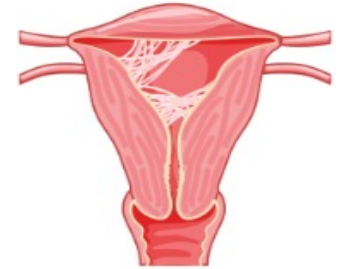
**Symptoms
of IUA**

**Low fecundity
Infertility**

**Pregnancy loss
Abnormal placentation
Complicated pregnancy**

- Wang PH, et al. Intrauterine adhesion. Taiwan J Obstet Gynecol. 2024.

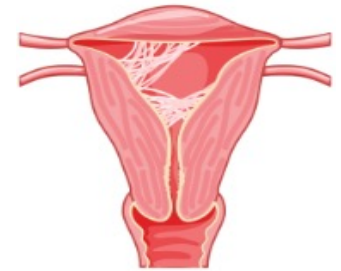
Classification



The extent of Cavity involved	<1/3	1/3-2/3	>2/3
Score	1	2	4
Type of Adhesions	Firmly	Firmly&Dense	Dense
Score	1	2	4
Menstrual Pattern	Normal	Hypomenore	Amenore
Score	1	2	4
Stage 1	Mild	1-4	
Stage 2	Moderate	5-8	
Stage 3	Severe	9-12	

Intrauterine Adhesions Classification/American Fertility Society, 1998.

Classification



Parameter	Description	Score
Endometrial thickness (mm)	≤5	10
	>5	0
Hysteroscopic findings		
Type of adhesion	Filmy, <50% of the cavity	1
	Filmy, >50% of the cavity	2
	Dense, <50% of the cavity	2
	Dense, >50% of the cavity	4
Visualization of tubal ostia	One ostium visualized	2
	No ostia visualized	4
Menstrual pattern	Hypomenorrhea	4
	Amenorrhea	8
Reproductive history	≥2 miscarriages	2
	Infertility	4
0–9: Mild (good prognosis), 10–15: Moderate (fair prognosis), 16–30: Severe (poor prognosis)		

A New Intrauterine Adhesions Classification System: The “Loddo Score”

Alessandro Loddo^{1*}, Leon Kaza², Stefania Saponara¹

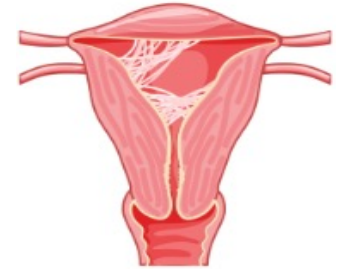
¹Division of Gynecology and Obstetrics, Department of Surgical Sciences, University of Cagliari, Cagliari, Italy, ²Department of Obstetrics and Gynecology, Lezhe Regional Hospital, Lezhe, Albania

11/6/2026

Dr Bechir Zouaoui Gynazur 2026, Chair of the Congress, Saint-Jules Medical Center, Lezine Regional Hospital, Lezine, A
France

Gynecology and Minimally Invasive Therapy 14 (2025) 8-13

Étiologies

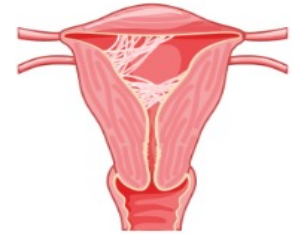


GRAVIDIQUES

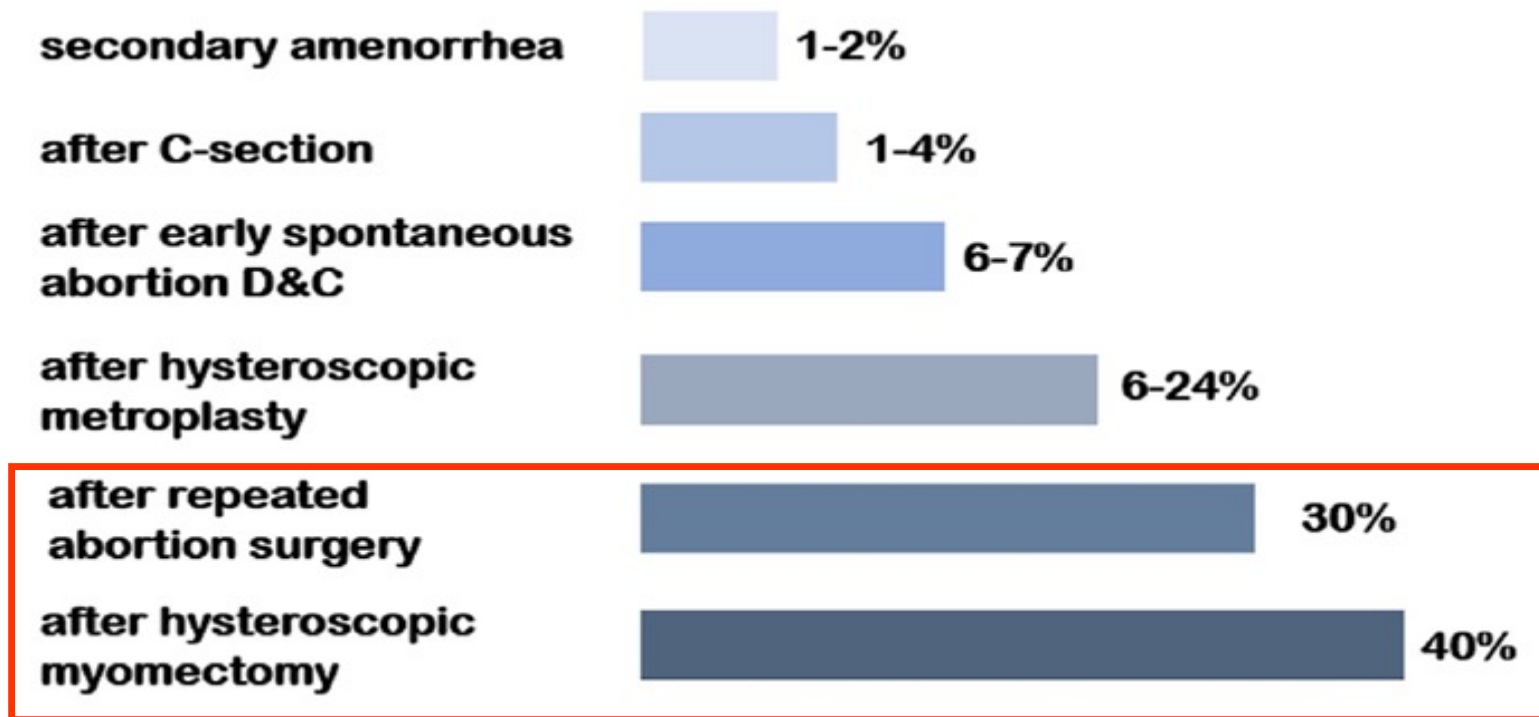
1. Curetage post-grossesse
2. La rétention trophoblastique
3. Césarienne
4. Délivrance artificielle et Révision utérine
5. Hémorragie du postpartum (sutures de compression utérines)

NON GRAVIDIQUES

1. Infections pelviennes, tuberculose génitale
2. Chirurgie utérine / hystéroscopie opératoire +++ : Jusqu'à 45 %
 - ✓ Myomectomie
 - ✓ Endometrectomie
 - ✓ polypectomie
 - ✓ cure de cloison
 - ✓ cure de synéchie !!!



The prevalence of intrauterine adhesion



Wang PH, et al. Intrauterine adhesion. Taiwan J Obstet Gynecol. 2024.

Intrauterine Adhesions and Asherman Syndrome: A Retrospective Dive into Predictive Risk Factors, Diagnosis, and Surgical Perspectives

Loredana Maria Toma ^{1,2}, Demetra Socolov ^{3,4} , Daniela Matei ¹, Sorana Anton ^{3,4}, Raluca Balan ^{2,5} , Emil Anton ^{2,3}, Roxana Covali ^{1,2,*} , Mihaela Tirnovanu ^{3,4}, Handra Elicona ^{3,4}, Theodor Pantilimonescu ^{6,7} and Razvan Socolov ^{2,3} 

Diagnostics 2025, 15, 955

Obstetrical History	Primary Infertility		Secondary Infertility		CHI2 Test
	No.	%	No.	%	
Intrauterine adhesions	no = 41		no = 53		p Value
Spontaneous abortion (complete or incomplete)	0	0.0	41	77.4	<u>0.001</u>
Complete spontaneous abortion	0	0.0	37	69.8	<u>0.001</u>
Induced abortion	0	0.0	9	17.0	<u>0.002</u>
Therapeutic abortion	0	0.0	2	3.8	0.265
Medical abortion	0	0.0	4	7.5	0.068
Stillbirth	0	0.0	0	0.0	nc
Dilation and curettage	0	0.0	41	77.4	<u>0.001</u>
Postpartum curettage	0	0.0	4	7.5	0.068
Asherman syndrome	no = 11		no = 18		p value
Spontaneous abortion (complete or incomplete)	0	0.0	11	61.1	<u>0.003</u>
Complete spontaneous abortion	0	0.0	10	55.6	0.048
Induced abortion	0	0.0	1	5.6	0.556
Therapeutic abortion	0	0.0	1	5.6	0.556
Medical abortion	0	0.0	2	11.1	0.300
Stillbirth	0	0.0	1	5.6	0.556
Dilation and curettage	0	0.0	15	93.8	0.001
Postpartum curettage	0	0.0	2	11.1	0.300

Intrauterine Adhesions and Asherman Syndrome: A Retrospective Dive into Predictive Risk Factors, Diagnosis, and Surgical Perspectives

Loredana Maria Toma ^{1,2}, Demetra Socolov ^{3,4} , Daniela Matei ¹, Sorana Anton ^{3,4}, Raluca Balan ^{2,5} , Emil Anton ^{2,3}, Roxana Covali ^{1,2,*} , Mihaela Tirnovanu ^{3,4}, Handra Elicona ^{3,4}, Theodor Pantilimonescu ^{6,7} and Razvan Socolov ^{2,3} 

Diagnostics 2025, 15, 955

Surgical Interventions	No Infertility		Primary Infertility		Secondary Infertility		Chi Square Test
	No.	%	No.	%	No.	%	
Intrauterine Adhesions							
No.	8		41		53		<i>p</i> value
C-section	6	75.0	-	-	7	13.2	<u>0.001</u>
D&C for biopsy	-	-	-	-	-	-	-
Classic myomectomy	-	-	-	-	2	3.8	0.265
Laparoscopic myomectomy	-	-	-	-	1	1.9	0.517
Hysteroscopic myomectomy	-	-	1	2.4	2	3.8	0.728
UAE	-	-	1	2.4	1	1.9	0.834
Hysteroscopic polypectomy	-	-	-	-	-	-	-
Hysteroscopic septoplasty	-	-	1	2.4	-	-	0.399
Hysteroscopic adhesiolysis	-	-	-	-	1	1.9	0.517
Asherman Syndrome							
No.	3		11		18		<i>p</i> value
C-section	1	33.3	-	-	2	11.1	0.171
D&C for biopsy	-	-	2	18.2	-	-	0.104
Classic myomectomy	-	-	2	18.2	-	-	0.104
Laparoscopic myomectomy	-	-	-	-	-	-	-
Hysteroscopic myomectomy	-	-	-	-	-	-	-
UAE	-	-	1	9.1	-	-	0.333
Hysteroscopic polypectomy	-	-	1	9.1	-	-	0.333

Prévention

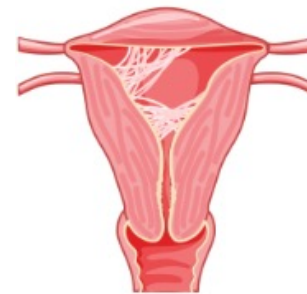
Prévention **primaire** :

poser correctement l'indication opératoire

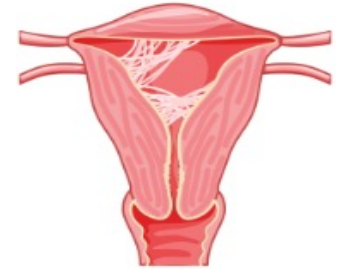
choisir la technique opératoire

utiliser moyens anti-adhésifs

Prévention **secondaire** : éviter la récurrence de la synéchie



Prévention Primaire



Indications bien posées avant tout curetage ou geste invasif

Préférer l'aspiration douce (vacuum) au curetage mécanique

Réduction du nombre d'interventions (éviter gestes répétés)

Gestion médicale en première intention si possible (ex : misoprostol)

Prévention des complications des césariennes

Intrauterine adhesion in ultrasound-guided manual vacuum aspiration (USG-MVA) versus electric vacuum aspiration (EVA): a randomised controlled trial



Chung et al. BMC Pregnancy and Childbirth (2024) 24:135
<https://doi.org/10.1186/s12884-024-06328-y>

BMC Pregnancy and Childbirth

Jacqueline Pui Wah Chung^{1*}, Tracy Sze Man Law¹, Karen NG¹, Patricia Nga Ping IP¹ and Tin Chiu Li¹

Characteristic	USG-MVA (n = 24)	EVA (n = 40)	P
Time to hysteroscopy (weeks)	10.36 (8.07–13.0)	10.57 (7.88–16.3)	0.75
AFS* assessment in those with adhesions			
Hysteroscopic Score	2.0 (2.0–3.75)	3.0 (2.0–6.0)	0.02
Extent of Cavity Involved			0.08
< one third	22 (91.7%)	27 (67.5%)	
One third to two thirds	2 (8.3%)	12 (30.0%)	
> two thirds	0 (0.0%)	1 (2.5%)	
Type of IUA			0.24
Flimsy	16 (66.7%)	19 (47.5%)	
Flimsy and dense	6 (25.0%)	12 (30.0%)	
Dense	2 (8.3%)	9 (22.5%)	
Menstrual pattern			0.04
Normal	22 (91.7%)	25 (62.5%)	
Hypomenorrhea	2 (8.3%)	14 (35.0%)	
Amenorrhea	0 (0.0%)	1 (2.5%)	
Prognostic classification			0.01
Stage 1 (Mild)	22 (91.7%)	24 (60.0%)	
Stage 2 (Moderate)	2 (8.3%)	16 (40.0%)	
Stage 3 (Severe)	0 (0.0%)	0 (0.0%)	

Dr Bechir Zouaoui Gynazur 2026 Palais des congrès d'Antibes Nice
 France



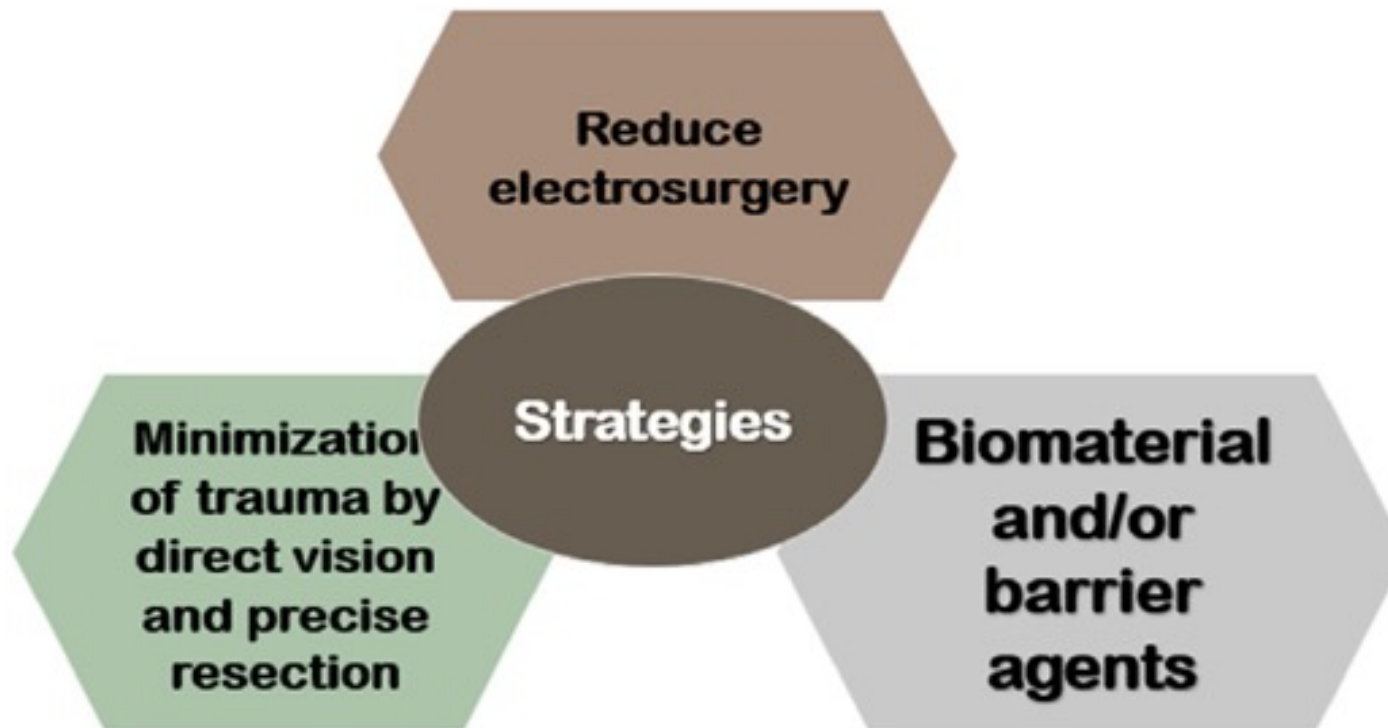
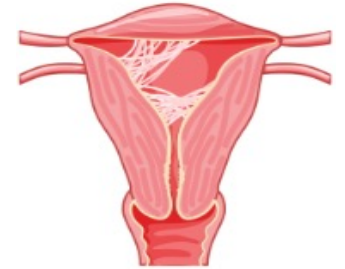


Intrauterine adhesion in ultrasound-guided manual vacuum aspiration (USG-MVA) versus electric vacuum aspiration (EVA): a randomised controlled trial

Jacqueline Pui Wah Chung^{1*}, Tracy Sze Man Law¹, Karen NG¹, Patricia Nga Ping IP¹ and Tin Chiu Li¹

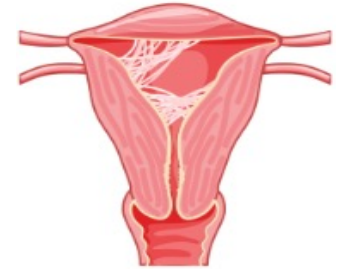
Characteristic	USG-MVA		P	EVA		P
	No Adhesion (N = 102)	Adhesion (N = 24)		No Adhesion (N = 85)	Adhesion (N = 40)	
Menstruation						
Regularity			0.76			0.53
Regular	61 (75.3%)	13 (72.2%)		51 (71.8%)	21 (65.6%)	
Irregular	20 (24.7%)	5 (27.8%)		20 (28.2%)	11 (34.4%)	
Flow			0.78			0.23
Light	25 (30.9%)	6 (33.3%)		27 (38.0%)	14 (43.8%)	
Normal	47 (58.0%)	11 (61.1%)		38 (53.5%)	18 (56.3%)	
Heavy	9 (11.1%)	1 (5.6%)		6 (8.5%)	0 (0.0%)	
Reproductive outcome						
Contemplation of pregnancy			0.59			0.89
Yes	49 (48.0%)	13 (54.2%)		33 (38.8%)	15 (37.5%)	
No	53 (52.0%)	11 (45.8%)		52 (61.2%)	25 (62.5%)	
Successful conception	21 (21.4%)	6 (26.1%)	0.63	14 (16.5%)	8 (20.0%)	0.63
Time to pregnancy (weeks)	13 (8.67–17.33)	10.83 (8.67–19.5)	1	13 (4.33–26.0)	13 (9.75–13)	0.35
Pregnancy outcome			0.33			0.02
Miscarriage	3 (14.3%)	0 (0.0%)		2 (14.3%)	5 (62.5%)	
On-going pregnancy	18 (85.7%)	6 (100%)		12 (85.7%)	3 (37.5%)	
Data are given as n (%) or median (Interquartile range)						

Prévention Primaire



Wang PH, et al. Intrauterine adhesion. Taiwan J Obstet Gynecol. 2024.

Prévention Primaire



Bipolaire vs monopolaire



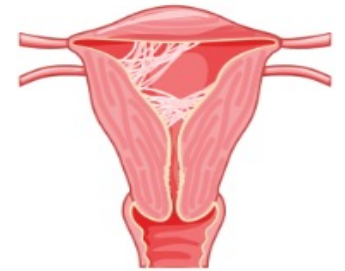
-risque de synéchie 7,5 % vs 35 %.



- bipolaire: moins de complications métaboliques et de surcharge liquidienne pendant l'opération.

Litta P, et al. Monopolar versus bipolar device: safety, feasibility, limits and perioperative complications in performing hysteroscopic myomectomy. Clin Exp Obstet Gynecol. 2014

Prévention Primaire



MyoSure®



TruClear™



Intrauterine BIGATTI Shaver (IBS®)

ORIGINAL RESEARCH ARTICLE

Manual morcella
morcellation (Tru
randomized cont

Steffi van Wessel¹ | T
Steven Weyers¹

European Journal of Obstetrics and Gynecology 235 (2023) 170–174



Full length article

Nonelectric shaving of endometrial polyp by hysteroscopy - A new technique to eliminate thermal damage

Avishalom Sharon^{a,b,*}, Muhammad Zidane^{a,b}, Ala Aiob^{a,b}, Liat Apel-Sarid^c, Jacob Bornstein^{a,b}



➔ Risque de synéchie
Myome type 2 FIGO : peu efficace

Efficacy of hyaluronic acid on the prevention of intrauterine adhesion and the improvement of fertility: A meta-analysis of randomized trials

Yi-Ran Liu, Bao Liu, Bo-Ping Yang, Yi Lan, Yu-Gang Chi *

Complementary Therapies in Clinical Practice 47 (2022) 101575

Chongqing Health Center for Women and Children, China

Meta-analysis of outcome measures of studies comparing with and without using hyaluronic acid gel.

Outcome measures	Number of studies	Heterogeneity	Overall effect size	95%CI	p
Adhesion score before operation	3	$P = 0.007, I^2 = 80\%$	MD -0.34	-0.26, 0.93	0.26
Adhesion score at follow up	5	$P < 0.00001, I^2 = 99\%$	MD -1.44	-2.91, 0.03	0.05
IUA after hysteroscopy					
-Mild	3	$P = 0.74, I^2 = 0\%$	OR 1.31	0.73, 2.37	0.36
-Moderate to severe	3	$P = 0.23, I^2 = 31\%$	OR 0.13	0.06, 0.30	<0.00001
IUA after curettage					
-Mild	3	$P = 0.55, I^2 = 0\%$	OR 0.63	0.35, 1.14	0.13
-Moderate to severe	3	$P = 0.71, I^2 = 0\%$	OR 0.08	0.02, 0.28	0.0001
Reproductive outcome					
-Ongoing pregnancy	3	$P = 0.94, I^2 = 0\%$	OR 1.94	1.22, 3.11	0.006
-Ectopic pregnancy	2	$P = 0.37, I^2 = 0\%$	OR 1.16	0.16, 8.44	0.88
-Abortion	2	$P = 0.51, I^2 = 0\%$	OR 0.92	0.46, 1.82	0.81
-Live birth	2	$P = 0.26, I^2 = 20\%$	OR 1.93	1.13, 3.30	0.02

Abbreviations: CI = confidence interval; IUA = intrauterine adhesion; MD = mean difference; OR = odds ratio.

Efficacy and safety of auto-cross-linked hyaluronic gel to prevent intrauterine adhesion after hysteroscopic electrosurgical resection: a multi

Journal of
Clinical Medicine

ELSEVIER



CrossMark

JMIG
The Journal of
Minimally Invasive
GynecologyLiu^{1,2},

Original Article

New Crosslinked Hyaluronan Gel for the Prevention of Intrauterine Adhesions after Dilation and Curettage in Patients with Delayed Miscarriage: A Prospective, Multicenter, Randomized, Controlled Trial

Xueying Li, MD, Ling Wu, MD, Yanfei Zhou, MD, Xing Fan, MD, Jufang Huang, MD, Juhua Wu, MD, Renxiu Yu, MD, Jianying Lou, MD, Mengjie Yang, MD, Zhihong Yao, MD, and Min Xue, MD

Acid for Prevention of Aspects of Gel Barriers

Sophia de Wilde¹, Rajesh Devassy¹ ,

Mécanisme d'action: inhibe la migration et la phagocytose des granulocytes et le dépôt de plaquettes



Effects and safety of hyaluronic acid gel on intrauterine adhesion and fertility after intrauterine surgery: a systematic review and meta-analysis with trial sequential analysis of randomized controlled trials



Yan Luo, MD; Yuanyuan Sun, MD; Bixia Huang, MD; Jingjing Chen, MD; Bin Xu, MD; Hui Li, MD

Variables	Number of studies	Participants	Model	RR (95% CI)	P value
Volume of HA	14	1977	Random	0.53 (0.45–0.62)	<.00001
10 mL	5	778		0.43 (0.31–0.61)	<.00001
5 mL	3	281		0.51 (0.23–1.11)	.09
3 mL	5	853		0.56 (0.43–0.74)	<u><.0001</u>
1 mL	1	65		0.30 (0.11–0.84)	<u>.02</u>



-
- Flacon de 10ml: 130-200 €
 - Flacon de 3ml réf 130280F
 - Laboratoire: Nordic pharma



Special Article

JMIG The Journal of Minimally Invasive Gynecology



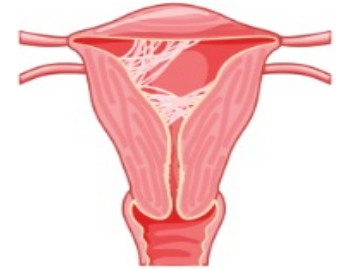
AAGL Practice Report: Practice Guidelines on Intrauterine Adhesions Developed in Collaboration With the European Society of Gynaecological Endoscopy (ESGE)

AAGL ELEVATING GYNECOLOGIC SURGERY

Guidelines for primary prevention of intrauterine adhesions

1. The risk for de novo adhesions during hysteroscopic surgery is impacted by the type of procedure performed with those confined to the endometrium (polypectomy) having the lowest risk and those entering the myometrium or involving opposing surfaces a higher risk. Level B
2. The method of pathology removal may impact the risk of de novo adhesions. The risk appears to be greater when electrosurgery is used in the non-gravid uterus and for blind versus vision-guided removal in the gravid uterus. Level C
3. The application of an adhesion barrier following surgery that may lead to endometrial damage significantly reduces the development of IUAs in the short term, although limited fertility data are available following this intervention. Level A

Prévention Secondaire



Technique chirurgicale de la cure de synéchie

hystéroscopique précoce (4–6 semaines)

Utilisation de dispositifs anti-adhérences :

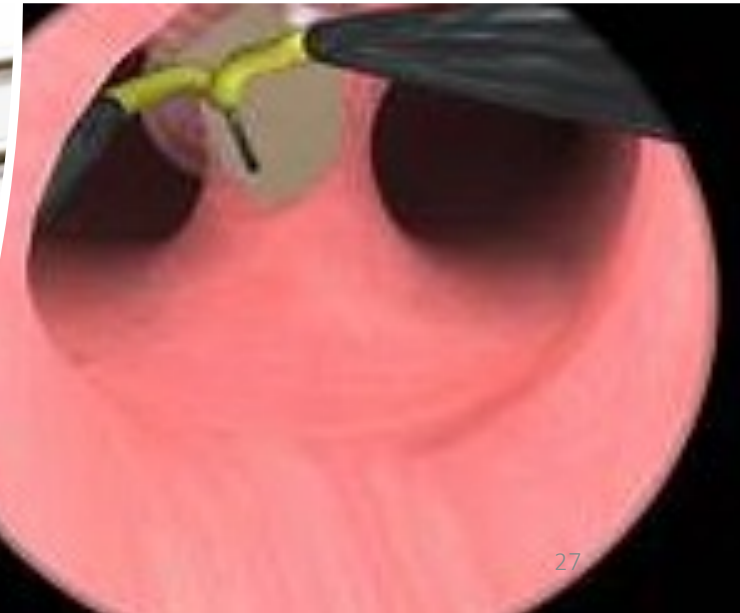
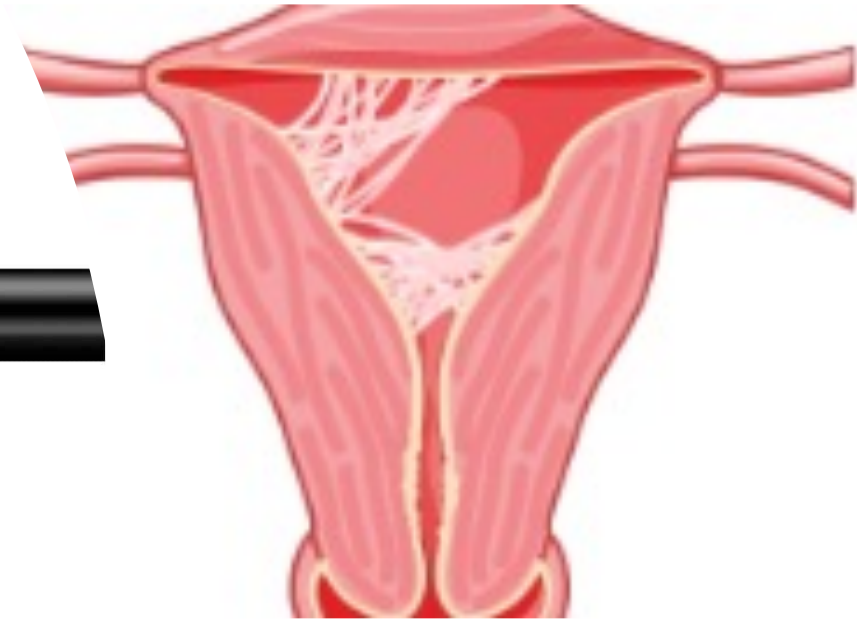
Gel d'acide hyaluronique (Hyalobarrier®, Seprafilm®, etc.)

Ballon intra-utérin ou stent temporaire

- **Œstrogénothérapie** post-opératoire : favorise la régénération de l'endomètre

Technique chirurgicale

- * ciseaux mécaniques
- * Electrode bipolaire
- * Laser
- * Pointe monopolaire





Comparison of hysteroscopic adhesiolysis with electrosurgery instrument or hysteroscopic scissors in the treatment of intrauterine adhesions of infertile or recurrent pregnancy loss women

Yang Li¹ · Yangzhi Li² · Yong Wang¹ · Minzhi Hou² · Xing Yan¹ · Dongmei Chen² · Yaxiao Chen² · Meiqing Xie² 

Variables	Total <i>n</i> = 461	Electrosurgery instru- ment group <i>n</i> = 285	Hysteroscopic scissors group <i>n</i> = 176	<i>p</i> -value [#]
Restoration of uterine cavity after HA, <i>n</i> (%)	383 (83.1)	228 (80.0)	155 (88.1)	0.025*
Improvement of menstrual flow after HA, <i>n</i> (%)	298 (64.6)	177 (62.1)	121 (68.8)	0.147
Receiving IVF-ET after HA, <i>n</i> (%)	137 (29.7)	84 (29.5)	53 (30.1)	0.884
Frequency of IVF-ET after HA	1.0 (1.0–2.0)	0.0 (0.0–1.0)	0.0 (0.0–1.0)	0.546
Implantation of the first IVF-ET after HA, <i>n</i> (%)	84 (61.3)	50 (59.5)	34 (64.2)	0.588
Pregnancy after HA	347 (75.3)	209 (73.3)	138 (78.4)	0.220
IUA with RPL, <i>n</i> (%)	187 (80.6)	109 (80.1)	78 (81.3)	0.834
IUA with infertility, <i>n</i> (%)	160 (69.9)	100 (67.1)	60 (75.0)	0.215
Live birth after HA	251 (55.9)	155 (55.6)	96 (56.5)	0.850
IUA with RPL, <i>n</i> (%)	138 (61.6)	82 (62.6)	56 (60.2)	0.718
IUA with infertility, <i>n</i> (%)	113 (50.2)	73 (49.3)	40 (51.9)	0.709

HA hysteroscopic adhesiolysis, RPL recurrent pregnancy loss, IUA intrauterine adhesions. Women who were pregnant at the end of follow-up were not included in the live birth rate calculation

Hysteroscopic adhesiolysis using the “ploughing technique”

Xiaowu Huang¹, Tin-Chiu Li^{1,2}, Enlan Xia¹

Utilise des ciseaux froids

Dissèque les bandes fibreuses en respectant les zones vasculaires

Réduction du traumatisme endométrial

Moins de récurrence comparé à l'électrochirurgie

HYSTÉROSCOPIE



Original Research

Effect of early second-look hysteroscopy on reproductive outcomes after hysteroscopic adhesiolysis in patients with intrauterine adhesion, a retrospective study in China

Wenzhi Xu, Yuxue Zhang, Yang Yang, Songying Zhang, Xiaona Lin*



	Pregnant result			Live birth result		
	Pregnant group	Non-pregnant group	P value	Live birth group	Non-live birth group	P value
Age ^a	30.48 ± 4.16	31.33 ± 3.88	0.253	29.72 ± 3.80	31.79 ± 4.15	0.002
AFC ^c	10	8	0.030	10	9	0.292
Tubal patency			0.705			0.033
Unobstructed	53	19		44	28	
Obstructed	55	24		36	43	
Semen test			0.817			0.605
Normal	83	34		61	56	
Abnormal	25	9		19	15	
Menstrual pattern ^b			0.041			0.975
Abnormal	99	40		73	66	
Normal menses	9	3		7	5	
Pregnancy history ^b			0.010			0.139
Infertility	70	37		52	55	
RSA (≥2)	38	6		28	16	
Adhesion grade ^b			0.591			0.233
Moderate	80	30		61	49	
Severe	28	13		19	22	
Adjuvant adhesion prevention methods ^b			0.597			0.806
control	18	4		13	9	
IUD	41	20		30	31	
Hyaluronic acid gel	9	2		6	5	
Intrauterine balloon	40	17		31	26	
Second -look time interval ^b			0.017			0.013
≤ 2 months	86	26		66	46	
> 2 months	22	17		14	25	
Times of adhesion relaxing ^b			< 0.001			0.014
≤ 2	102	32		75	59	
> 2	6	11		5	12	
Total	108	43		80	71	

11/6/2026

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ABSORBABLE BARRIERS



CROSSLINKED HYALURONIC ACID (CHA) GEL
OR HYALURONIC ACID (HA) GEL

PHYSICAL BARRIERS

INTRAUTERINE BALLOON CATHETERS



FLEXIBLE SILICON
BALLOON

INTRAUTERINE DEVICE (IUD)



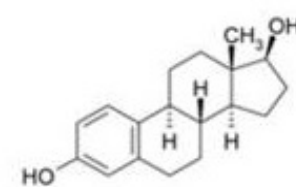
FOLEY BALLOON CATHETER



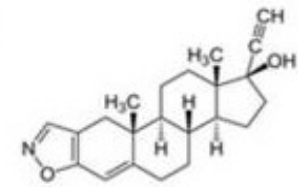
FOLEY CATHETER

FOLEY BALLOON

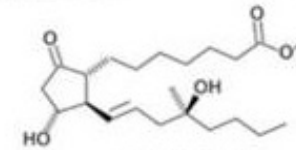
HORMONE



ESTRADIOL



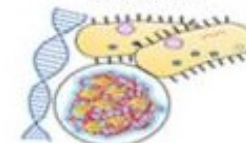
DANAZOL



MISOPROSTOL

CELL OR BIO-AGENTS

BIOAGENTS



CELL THERAPY



MÉTHODES MÉCANIQUES

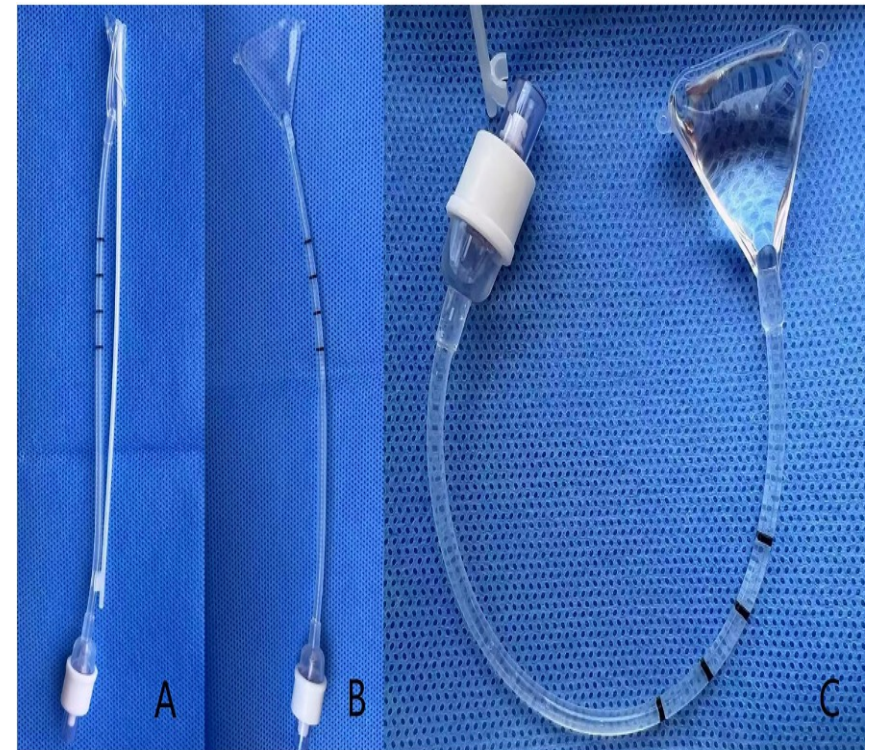


BALLONET/STENT

Diminue le risque de récidence (forme modérée/sévère)

Durée: 8 semaines
> 1semaine (pas de risque infectieux)

N'augmente pas le taux de grossesse



Supplementary Figure1

A. Original state of the balloon stent. **B.** Deflated balloon stent. **C.** Balloon stent filled with 3 mL of normal saline

Luo Y, at al . Extended intrauterine balloon stent use to prevent adhesion reformation after hysteroscopic adhesiolysis: a randomized trial. Fertil Steril. 2025.

DIU

Méthode efficace mais elle doit être associée à d'autre thérapie de prévention (hormonothérapie)



Lippes loop IUD



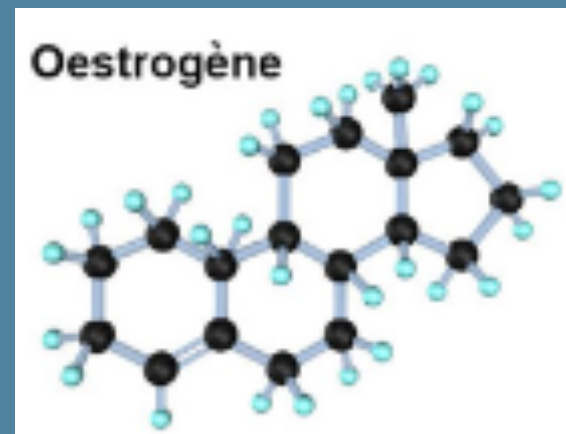
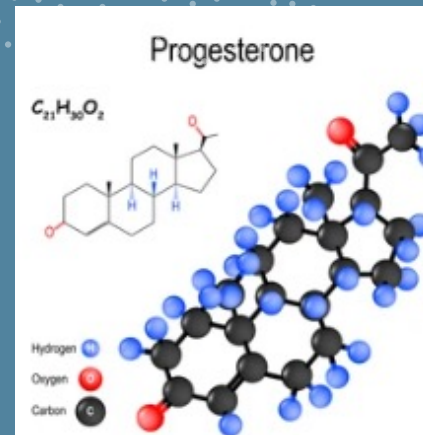
Heart-shaped copper IUD.

Lin XN, et al. Randomized, controlled trial comparing the efficacy of intrauterine balloon and intrauterine contraceptive device in the prevention of adhesion reformation after hysteroscopic adhesiolysis. *Fertil Steril*. 2015

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TRAITEMENT HORMONAL

- Le schéma le plus utilisé :
- valérate d'œstradiol (4 mg par jour pendant au moins 21 jours) + de l'acétate de médroxyprogestérone (10 mg durant les 7 derniers jours de traitement)



The Effect of Estrogen in the Prevention of Adhesion Reformation after Hysteroscopic Adhesiolysis: A Prospective Randomized Control Trial

Lingling Yang, MMed, Ning Ma, MMed, Dongmei Song, PhD, Xiaowu Huang, PhD, Qiaoyun Zhou, PhD, Yan Guo, MMed, Enlan Xia, MSc, Xiaoyu Shi, PhD, and Tin Chiu Li, MD, PhD

Variable	All cases			AFS ≤6			AFS >6		
	Treatment (n = 93)	Control (n = 89)	p value	Treatment (n = 47)	Control (n = 44)	p value	Treatment (n = 46)	Control (n = 45)	p value
Age (yr)*	31.2 ± 3.8	32.7 ± 3.9	.597	32.9 ± 3.4	33.6 ± 4.2	.387	31.9 ± 3.4	32.5 ± 4.2	.284
Miscarriages (number)*	1.5 ± 1.1	1.5 ± 1.2	.118	1.8 ± 1.0	1.6 ± 1.3	.334	1.6 ± 1.3	1.9 ± 1.4	.714
Parity*	0.2 ± 0.4	0.1 ± 0.3	.120	0.1 ± 0.2	0.1 ± 0.25	.765	0.3 ± 0.5	0.2 ± 0.5	.151
Menstrual pattern before presentation†									
Normal menstruation	7 (7.5)	6 (6.7)	.533	7 (14.9)	6 (13.6)	.552	0	0	.654
Amenorrhea	6 (6.5)	5 (5.6)		0	0		6 (13.1)	5 (11.1)	
Oligomenorrhea	80 (86)	78 (87.7)		40 (85)	38 (86.3)		40 (86.9)	40 (88.9)	
Underlying cause of IUA†									
D and C for termination of pregnancy	80 (86)	77 (86.5)	.248	38 (80.9)	34 (77.2)	.525	42 (91.3)	40 (88.9)	.516
Postpartum D and C	2 (2.2)	3 (3.4)		1 (2.1)	1 (2.3)		1 (2.2)	2 (4.4)	
Hysteroscopic surgery	3 (3.2)	2 (8.9)		2 (4.2)	1 (2.3)		1 (2.2)	1 (2.2)	
No intrauterine operation	8 (8.6)	10 (11.2)		6 (12.8)	8 (18.2)		2 (4.3)	2 (4.4)	
AFS score									
Before operation*	7.5 ± 2.2	7.7 ± 2.3	.521	5.4 ± 0.7	5.5 ± 0.7	.362	9.5 ± 1.2	9.8 ± 1.3	.610
At second-look*	1.9 ± 1.8	1.8 ± 1.7	.246	1.0 ± 1.1	1.0 ± 1.2	.665	2.8 ± 1.8	2.9 ± 1.9	.906
At third-look*	1.8 ± 1.9	2.0 ± 1.8	.340	1.1 ± 1.2	1.3 ± 1.2	.611	2.5 ± 2.2	2.7 ± 2.1	.982
Adhesion reformation rate†									
At second-look	34 (36.6)	31 (34.8)	.543	10 (21.2)	9 (20.4)	.324	24 (52.1)	22 (48.9)	.412
At third-look	20 (21.5)	18 (20.2)	.444	5 (10.6)	6 (13.6)	.754	15 (32.6)	12 (26.7)	.474
Menstruation pattern at 3 mo†									
Normal menstruation	28 (30.1)	24 (27)	.381	19 (40.4)	17 (38.6)	.516	9 (19.6)	7 (15.5)	.373
Amenorrhea	1 (1.1)	2 (2.2)		0	0		1 (2.17)	2 (4.4)	
Oligomenorrhea	64 (68.8)	60 (67.4)		28 (59.6)	27 (61.4)		36 (78.2)	36 (80)	

DIU à œstrogène

	Experimental group (n = 120)	Control group (n = 111)	p value
AFS score (60 days post-surgery)	2.24 ± 2.14	4.23 ± 2.86	<0.001
Reduction in adhesions (60 days post-surgery)	112 (93.33%)	65 (58.56%)	<0.001
Number (percentage) no adhesion (60 days post-surgery)	53 (44.17%)	22 (19.82%)	<0.001
Number (percentage) ESGE grade I (60 days post-surgery)	27 (22.50%)	26 (23.42%)	
Number (percentage) ESGE grade II (60 days post-surgery)	26 (21.67%)	40 (36.04%)	
Number (percentage) ESGE grade III (60 days post-surgery)	9 (7.50%)	12 (10.81%)	
Number (percentage) ESGE grade IV (60 days post-surgery)	2 (1.67%)	6 (5.41%)	
Number (percentage) ESGE grade Va (60 days post-surgery)	2 (1.67%)	4 (3.60%)	
Number (percentage) ESGE grade Vb (60 days post-surgery)	1 (0.83%)	1 (0.90%)	
Endometrial thickness (60 days post-surgery) (mm)	8.58 ± 7.43	4.87 ± 2.49	<0.001
Number (percentage) menstrual improvement (60 days post-surgery)	68 (56.67%)	44 (39.64%)	0.010
Number (percentage) total pregnancy rate	38 (31.67%)	28 (25.23%)	0.279
Number (percentage) natural pregnancy rate	21 (17.50%)	15 (13.50%)	0.404
Number (percentage) assisted reproductive pregnancy rate	17 (14.20%)	13 (11.70%)	0.579
Number (percentage) repeat TCRA	10 (10.42%)	12 (12.63%)	0.632

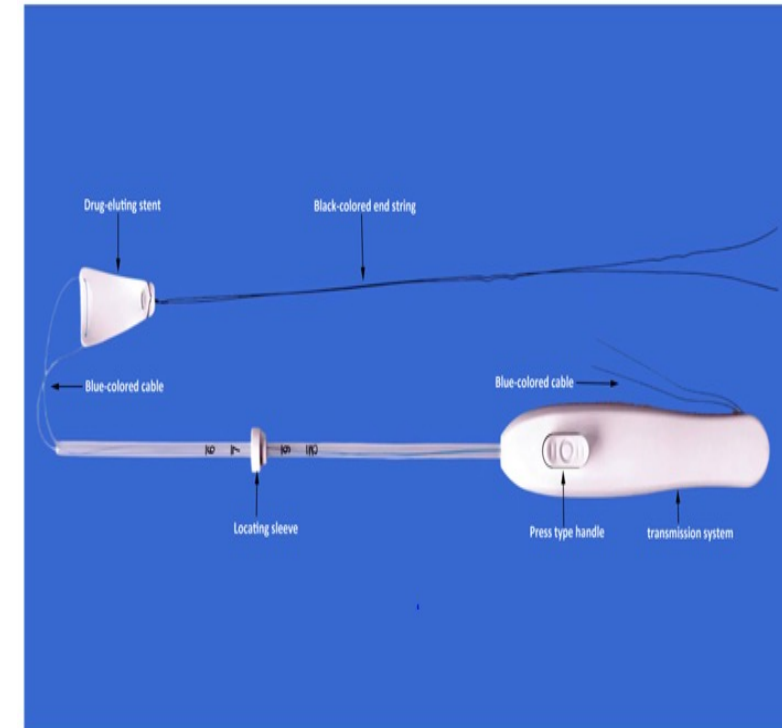
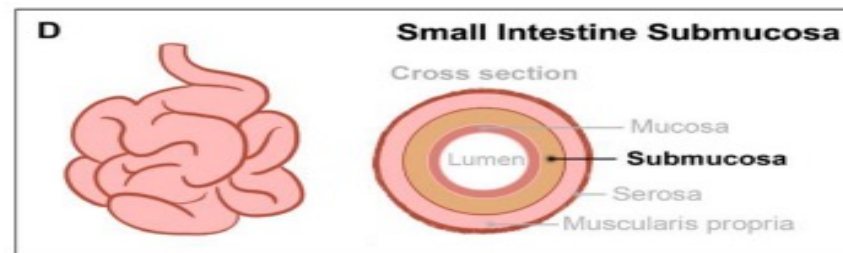
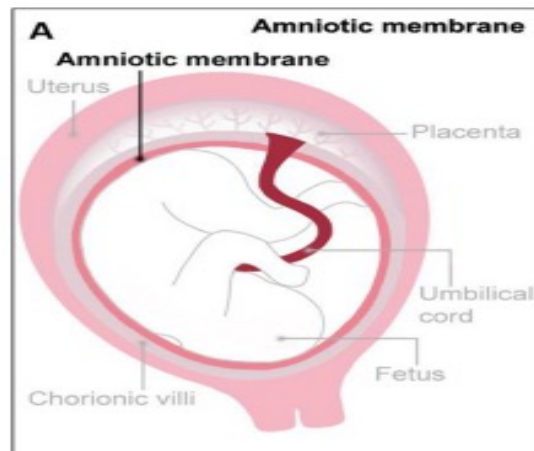
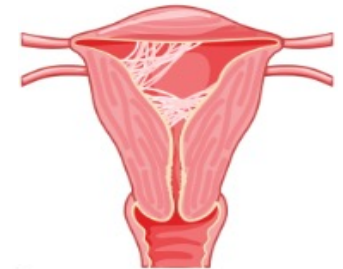
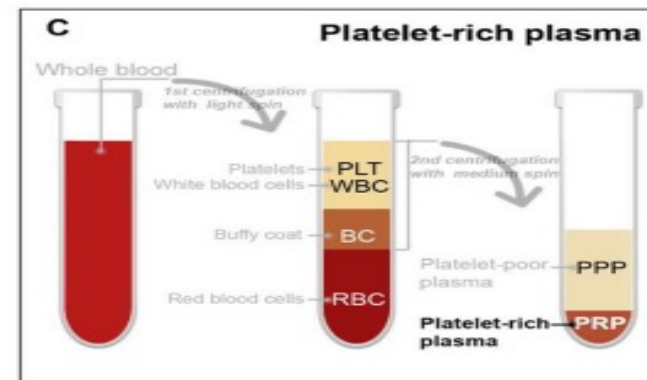
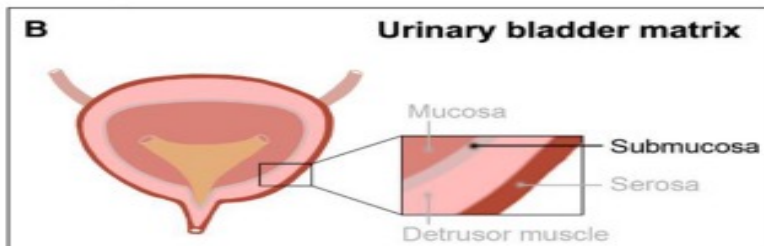


Fig. 1 Intrauterine estrogen-releasing system

Feng L, et al . A novel intrauterine estrogen-releasing system for preventing the postoperative recurrence of intrauterine adhesion: a multicenter randomized controlled study. BMC Med. 2024



Intrauterine adhesions



Ma, J., Zhan, H., Li, W. *et al.* Recent trends in therapeutic strategies for repairing endometrial tissue in intrauterine adhesion. *Biomater* 2021

Dr Bechir Zouaoui Gynazur 2026 Palais des congrès d'Antibes Nice France

AAGL Practice Report: Practice Guidelines on Intrauterine Adhesions Developed in Collaboration With the European Society of Gynaecological Endoscopy (ESGE)

AAGL *ELEVATING GYNECOLOGIC SURGERY*

Guidelines for Secondary Prevention of Intrauterine Adhesions

1. The use of an IUD, stent or catheter appears to reduce the rate of postoperative adhesion reformation. There are limited data regarding subsequent fertility outcomes when these barriers are used. Level A.
2. The risk of infection appears to be minimal when a solid barrier is used compared with no treatment. Level A.
3. There is no evidence to support or refute the use of pre-operative, intraoperative, or postoperative antibiotic therapy in surgical treatment of IUAs. Level C.
4. If an IUD is used postoperatively, it should be inert and have a large surface area such as a Lippes loop. Intrauterine devices that contain progestin or copper should not be used after surgical division of IUAs. Level C.

AAGL Practice Report: Practice Guidelines on Intrauterine Adhesions Developed in Collaboration With the European Society of Gynaecological Endoscopy (ESGE)

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5. Semi-solid barriers such as hyaluronic acid and auto-cross-linked hyaluronic acid gel reduce adhesion reformation. At this time, their effect on post-treatment pregnancy rates is unknown. Level A.
6. Following hysteroscopic-directed adhesiolysis, postoperative hormone treatment using estrogen, with or without progestin, may reduce recurrence of IUAs. Level B.
7. The role of medications designed as adjuvants to improve vascular flow to the endometrium has not been established. Consequently, they should not be used outside of rigorous research protocols. Level C.
8. Stem cell treatment may ultimately provide an effective adjuvant approach to the treatment of Asherman syndrome; however, evidence is very limited and this treatment should not be offered outside of rigorous research protocols. Level C.

Take home message

Myomectomie +++

Prévention primaire: Courant bipolaire, gel d'acide hyaluronique

Prévention secondaire: utilisation de ciseaux, hystéroscopie de second look, DIU à œstrogène+++

📅 05/11/2026 - 07/11/2026

📍 Tunis

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- Merci pour votre attention

