Breaking the Scars: From Asherman Syndrome to a Successful Pregnancy

Executive Summary · Country Focus: Ghana

PART 1 · EXECUTIVE SUMMARY

Overview

Intrauterine adhesions (IUA) are bands of scar tissue inside the uterine cavity that form after injury to the basal layer of the endometrium. When they cause symptoms, the condition is known as Asherman syndrome. Depending on their extent, adhesions can partly or completely obliterate the cavity, leading to scanty or absent menstruation, cyclical pelvic pain, infertility, recurrent pregnancy loss and serious complications in later pregnancies, including placenta accreta spectrum and postpartum haemorrhage.

Most adhesions follow uterine instrumentation, particularly curettage after miscarriage, abortion or childbirth, when the endometrium is especially vulnerable. Genital tuberculosis and other pelvic infections are important additional causes in many African settings. Because these triggers are common across the continent, where unsafe abortion, retained products of conception and repeated evacuation remain frequent, Asherman syndrome is likely to be considerably under diagnosed, and much of the disease is preventable through safer methods of uterine evacuation.

This WATOG Africa case series session, with Ghana as the country focus, presented the journey of a woman with severe adhesions after surgical termination of pregnancy who achieved a natural conception and vaginal birth at term after hysteroscopic adhesiolysis, a balloon barrier and hormonal support. Expert discussion then addressed diagnosis, classification, surgical technique, strategies to prevent recurrence, emerging regenerative therapies and the care of pregnancy after treatment, with practical adaptations for settings where resources are limited.

Case at a Glance

Patient	31-year-old woman with four years of infertility
Antecedent	Surgical termination of pregnancy
Symptoms	Menstruation reduced to one day of spotting; severe dysmenorrhoea
Findings	Multiple filling defects on imaging; dense adhesions on hysteroscopy
Treatment	Hysteroscopic adhesiolysis; paediatric Foley catheter balloon left in place for about 7 days; oestrogen followed by progesterone
Follow-up	Second-look hysteroscopy at 4 weeks: no recurrence; regular, less painful menses
Outcome	Natural conception within six months; live baby girl delivered vaginally at 37 weeks
Key lesson	Low cost tools, careful technique and planned follow up can restore fertility even in severe disease

Evidence Snapshot

Question	What the evidence shows
How common are adhesions after miscarriage surgery?	About 1 in 5 women on hysteroscopy, and nearly 1 in 3 after repeated curettage
How is the diagnosis made?	Hysteroscopy is the gold standard and allows treatment in the same sitting; 3D ultrasound and saline sonography are useful non invasive tests
Which barrier works best?	No single method is clearly superior; balloons are cheap and practical, and hyaluronic acid gel reduces adhesion reformation

Question	What the evidence shows
Does oestrogen therapy help?	Widely used to support regrowth of the endometrium; evidence on dose and duration comes from small trials and is not conclusive
How often do they return after treatment?	Roughly 20 to 60% in severe disease, much lower in mild to moderate disease
When should the cavity be rechecked?	Second-look hysteroscopy at about 4 to 6 weeks, especially in moderate to severe disease
What are the chances of pregnancy?	Classic series report about 90% in mild, 80% in moderate and 65% in severe disease, with lower live birth rates in recent severe cohorts
Do regenerative therapies work?	Platelet rich plasma and stem cell therapies show early promise but remain investigational

Why This Matters for Africa

Asherman syndrome sits at the intersection of reproductive rights, safe abortion care and fertility. In many African settings, sharp curettage is still used for miscarriage and abortion care, retained products are common, and genital tuberculosis remains endemic. Each of these increases the risk of adhesions, and women often present late, after years of infertility, having been investigated with hysterosalpingography alone.

The World Health Organization recommends vacuum aspiration or medical management with misoprostol and mifepristone in place of sharp curettage, which makes prevention a realistic goal for every health system. At the same time, the Ghanaian case showed that effective treatment does not depend on expensive technology. A paediatric Foley catheter, generic oestradiol and ultrasound guidance made treatment feasible, while training in hysteroscopy, including outpatient vaginoscopic techniques, and strong referral networks can extend access to women who need it.

Key Messages

- Suspect Asherman syndrome in any woman with reduced or absent menses, infertility or recurrent loss after a uterine procedure or pelvic infection.
- Exclude pregnancy, cervical stenosis and endocrine causes, and grade the adhesions, because severity guides prognosis and follow up.
- Hysteroscopy is both the gold standard for diagnosis and the treatment of choice; blind dilation and curettage is not an acceptable method of adhesiolysis.
- Treatment has three parts: divide the adhesions (cold scissors preferred), keep the walls apart, and help the endometrium regenerate.
- Second-look hysteroscopy after 4 to 6 weeks confirms recovery and treats early recurrence, especially in moderate to severe disease.
- Pregnancy after treatment is higher risk (placenta accreta spectrum, retained placenta, postpartum haemorrhage, preterm birth) and needs planned care in a well equipped facility.
- Genital tuberculosis must be treated first and carries a poorer prognosis.
- Prevention is best: avoid sharp curettage and repeated instrumentation, and use well maintained instruments with gentle technique.

Priority Actions

- Clinicians: replace sharp curettage with vacuum aspiration or medical management, and ask about menstrual change after any uterine procedure.
- Facilities: maintain instruments, provide ultrasound guided evacuation and establish referral pathways for suspected adhesions.
- Training programmes: expand hysteroscopy training, including outpatient vaginoscopic and mini hysteroscopy, across national and regional centres.
- Teams caring for pregnant women: flag a history of Asherman syndrome for placental assessment and planned delivery with blood available.
- WATOG Africa network: build shared African data on prevalence, treatment approaches and pregnancy outcomes, and evaluate low cost barrier methods.

1. Definitions and Burden

Intrauterine adhesions describe the physical presence of scar tissue between uterine walls, whereas Asherman syndrome describes adhesions with clinical consequences. Adhesions are common after uterine injury: a systematic review of women after miscarriage found adhesions in about 1 in 5 on hysteroscopy, with risk rising to nearly 1 in 3 after repeated curettage. Prevalence is higher where unsafe abortion, retained products and genital infection are common, which includes many African settings. Because the condition is under-diagnosed, the true burden is probably higher than reported.

2. Causes and Prevention

Damage to the basal layer disrupts normal regeneration, leading to inflammation, fibroblast activation and collagen deposition. The endometrium is most vulnerable in the weeks after pregnancy, when oestrogen levels are low.

Setting	Why it matters	Prevention
Miscarriage or abortion evacuation	Commonest cause; risk rises with repeated procedures, retained products and infection	Prefer medical management or vacuum aspiration under ultrasound guidance; WHO advises replacing sharp curettage; avoid repeat curettage
Postpartum retained placenta, haemorrhage	Highly vulnerable post-pregnancy endometrium	Gentle, ultrasound-guided evacuation; hysteroscopic removal of retained tissue where available
Infection	Genital tuberculosis and pelvic inflammatory disease cause chronic inflammation; TB adhesions are often severe with a poor prognosis	Prompt treatment of infection; consider TB testing in endemic areas
Uterine surgery	Myomectomy entering the cavity, septum resection, caesarean section and uterine compression sutures	Minimise diathermy, careful closure, adhesion barrier gel and early review after extensive hysteroscopic surgery
Instrument condition and technique	Worn or damaged instruments injure the lining	Do not use damaged equipment; cervical priming and gentle dilation

3. Presentation and Differential Diagnosis

Women typically present with hypomenorrhoea or amenorrhoea (sometimes with cyclical pain if the cervix is blocked), dysmenorrhoea, infertility or recurrent miscarriage. Others are asymptomatic, with adhesions found during infertility work-up. Alternative causes of reduced or absent menses must be excluded: pregnancy, cervical stenosis, thyroid disease, hyperprolactinaemia, polycystic ovary syndrome and premature ovarian insufficiency. Normal FSH and ovarian function with no withdrawal bleed after oestrogen and progestogen suggests a uterine cause.

4. Diagnosis and Classification

Test	Role and limitations
Hysteroscopy	Gold standard: shows the extent, type and location of adhesions and allows treatment in the same sitting, particularly for thin, filmy bands. Outpatient (vaginoscopic) approaches are increasingly available
3D ultrasound and saline infusion sonography	Non-invasive and better than 2D scanning at showing cavity distortion and thin or absent endometrium
Hysterosalpingography	Widely available; shows filling defects and tubal patency but may give false positives from bubbles, mucus or debris and gives no information on the endometrium
2D transvaginal ultrasound	Accessible first test for a thin or irregular endometrium, but can miss adhesions
MRI	Selected cases such as obliterated cavity or cervical stenosis; limited access and cost

Classification (AFS 1988, ESGE 2017) combines the extent and density of adhesions, tubal ostia involvement and menstrual pattern to grade disease as mild, moderate or severe. Grade matters because it predicts prognosis, guides the need for second-look hysteroscopy and informs counselling.

5. Treatment: Three Goals

Remove the adhesions. Hysteroscopic adhesiolysis under direct vision is the primary treatment. Cold microscissors are preferred for most adhesions because they avoid thermal injury to surviving endometrium, with electrosurgery reserved for selected thick bands (using saline and bipolar energy where possible). Work from the centre outwards and aim to restore a normal cavity with both tubal ostia visible. In dense or obliterated cavities, concurrent ultrasound or laparoscopic guidance reduces the risk of perforation. Blind dilation and curettage is not an acceptable method of adhesiolysis.

Keep the walls apart. A physical or biological barrier is used while the cavity heals, as summarised below. No single method has been shown to be superior.

Strategy	How it works	Evidence and practical notes
Intrauterine balloon or Foley catheter	Separates the walls mechanically	Cheap and widely used; a small paediatric Foley with a low-volume balloon is a practical option, left for about 7–10 days with antibiotic cover. Comparative evidence is low quality but suggests it is at least as effective as an IUD
Hyaluronic acid gel	Biodegradable barrier	Trials show less adhesion formation at second-look hysteroscopy; effect on live birth is unproven; cost and availability limit use
Intrauterine device	Barrier	Copper T devices are generally not advised: they do not separate the walls well and cause inflammation. Larger inert devices have been used historically
Amniotic membrane graft	Barrier and regenerative effect	Small studies only; not routine

Support regeneration. Oestrogen therapy after surgery, commonly 2–4 mg of oestradiol daily for 1–2 months with a progestogen added for the last 10 days to induce a withdrawal bleed, stimulates endometrial regrowth. Evidence for dose and duration comes from small trials and is not conclusive. Consider thrombotic risk in each woman.

Check the result. Second-look hysteroscopy, commonly after 4–6 weeks, identifies new adhesions while they are still thin and easily divided, and confirms a normal cavity. It is particularly important in moderate to severe disease, and may be repeated until the cavity is normal. Where it is unavailable, saline sonography or hysterosalpingography plus monitoring of the menstrual pattern are practical alternatives.

6. Safety and Special Situations

Complications of adhesiolysis: uterine perforation (greater risk in dense or obliterated cavities, reduced by ultrasound or laparoscopic guidance), fluid overload and hyponatraemia (use saline with bipolar energy and keep strict fluid balance), bleeding, infection, incomplete division and early recurrence. Stop and reassess if the plane is unclear rather than cutting blindly.

- **Cyclical pain with absent menses:** suggests an obstructed cervix or cavity with haematometra, which needs prompt assessment and drainage.
- **Genital tuberculosis:** start full anti-tuberculosis treatment first; adhesions are usually dense and recur often, and assisted reproduction or surrogacy is frequently needed.
- **Incidental mild adhesions:** in a woman with no symptoms and no fertility problem, observation is reasonable; treat women with symptoms or fertility difficulty.
- **Counselling:** return of menses does not prove a normal cavity, more than one procedure may be needed, and women should know that pregnancy needs specialist antenatal care.

7. Suggested Management Pathway

Step	Action
1. Suspect	Menstrual change, infertility or recurrent loss after a uterine procedure; exclude pregnancy and other causes
2. Confirm	Hysteroscopy (or sonography and HSG if unavailable); grade the adhesions
3. Treat	Hysteroscopic adhesiolysis with cold instruments, under ultrasound or laparoscopic guidance if dense
4. Prevent recurrence	Balloon or gel barrier, oestrogen then progestogen, antibiotic cover
5. Verify	Second-look hysteroscopy at 4–6 weeks; repeat if adhesions recur
6. Conceive and monitor	Encourage conception soon after a normal cavity is confirmed; consider assisted reproduction if no pregnancy within 6–12 months; plan high-risk antenatal care

8. Outcomes and Pregnancy after Treatment

Menstruation is restored in most women, and outcomes depend on severity. Classic series reported pregnancy rates of roughly 90% in mild, 80% in moderate and 65% in severe disease, although more recent cohorts report lower live birth rates in severe disease. Recurrence is common in severe disease and may reach 20–60%, compared with a much lower rate in mild to moderate disease. Women with dense adhesions may need IVF; those with persistently thin endometrium or poor response may need regenerative approaches or, rarely, surrogacy.

Even after successful treatment, pregnancy carries higher risk of miscarriage, preterm birth, placenta praevia and placenta accreta spectrum, retained placenta and postpartum haemorrhage. Recommended care includes:

- An early ultrasound to confirm location and dating.
- A detailed placental assessment in the second trimester, with imaging if accreta is suspected.
- Delivery in a facility with senior staff and blood available, active management of the third stage, and readiness for retained placenta and haemorrhage.

9. Emerging Therapies

Several regenerative approaches target the damaged endometrium and may help women with refractory, severe disease. All are still investigational:

- **Platelet-rich plasma (PRP):** intrauterine infusion of growth factors; small studies show thicker endometrium, but live birth benefit is unproven.
- **Stem-cell therapy:** bone marrow, menstrual blood or umbilical cord derived cells; early-phase studies report endometrial regrowth.
- **Tissue engineering:** scaffolds, hydrogels and cell-loaded matrices to repair the lining.
- **Other agents:** G-CSF and sildenafil have been tried to improve endometrial thickness, with limited evidence.

10. Challenges in African Settings

- Unsafe abortion and repeated curettage remain major drivers; expanding access to misoprostol and vacuum aspiration is a prevention measure.
- Genital tuberculosis is still an important cause, with a poorer prognosis.
- Late diagnosis, because women present late and are often investigated with hysterosalpingography only.
- Few hysteroscopes and few trained operators; training, vaginoscopic and mini-hysteroscopy, and referral networks improve access.
- Low-cost adaptations such as paediatric Foley balloons, generic oestradiol and ultrasound guidance make treatment feasible, while gels, PRP and stem-cell therapy are rarely accessible.
- Follow-up is hard to deliver, so counselling, appointments and reminders at the first visit are important.

11. Evidence Gaps

- No barrier or hormonal regimen has shown a clear live birth advantage in randomised trials.

- Optimal oestrogen dose, balloon duration and timing of second-look hysteroscopy are not defined.
- Whether to treat asymptomatic or minor adhesions found incidentally is unresolved; treatment should focus on women with symptoms or fertility problems.
- Long-term fertility and obstetric outcomes, and the role of regenerative therapies, need larger well-designed studies.

12. Decision Support: Qwiva Health

The session included a demonstration of Qwiva Health, a clinical decision-support and learning platform for verified healthcare professionals, reported to hold about 300,000 scientific papers and 30,000 clinical guidelines. Its consult mode answers focused questions such as treatment options, doses or catheter management; study mode gives detailed explanations of pathophysiology, diagnosis and research. Answers are referenced and take local resources into account, and registration is free for licensed practitioners after credential verification.

13. Key Takeaways

- Prevention comes first: avoid unnecessary or repeated uterine instrumentation and use gentle technique.
- Recognise early: menstrual change or infertility after a uterine procedure should prompt assessment.
- Hysteroscopy diagnoses and treats; cold dissection protects the endometrium.
- Follow-up is part of the treatment: barrier, oestrogen and second-look hysteroscopy.
- Plan pregnancy care carefully because of placental and haemorrhage risks.
- Share cases and use accessible evidence tools to strengthen care across Africa.