

CAESAREAN SCAR ENDOMETRIOSIS AND ISTHMOCELE: WHERE IS THE DIVIDING LINE?

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BACKGROUND

Caesarean scar niche (isthmocele) and caesarean scar endometriosis are distinct complications of previous caesarean scar delivery, although their clinical and imaging features may overlap.

An isthmocele is classically defined as a myometrial defect communicating with the endometrial cavity, whereas caesarean scar endometriosis consists of ectopic endometrial tissue within or around the surgical scar.

We report an unusual presentation of a cystic lesion containing chocolate-coloured fluid at the previous

CASE PRESENTATION

PATIENT

39-year-old multiparous woman

PRESENTATION

Brownish vaginal discharge associated with menstruation

History

- Symptoms began after removal of a contraceptive implant.
- Associated left-sided lower abdominal pain.
- Examination was largely unremarkable apart from mild left suprapubic tenderness.

Initial ultrasound

- Small defect in the lower uterine segment at the site of a previous caesarean section.
- Fluid collection between the bladder and anterior uterine wall.

THE DIAGNOSTIC DILEMMA

CAESAREAN SCAR ENDOMETRIOSIS

- Ectopic endometrial tissue within/around the surgical scar.
- Cyclical symptoms may support the diagnosis.
- Chocolate-coloured fluid can create a strong clinical impression of endometriosis.

ISTHMOCELE / CAESAREAN SCAR NICHE

- Myometrial defect at the previous caesarean scar, classically communicating with the endometrial cavity.
- May cause abnormal uterine bleeding, chronic pelvic pain and infertility.
- Persistent scar defect on imaging is an important clue.

WHY THE DISTINCTION MATTERS

The overlap is clinically important because the apparent “endometriotic” cyst may actually represent an atypical caesarean scar defect containing altered blood.

The anatomical relationship of the lesion to the uterine cavity, myometrium and bladder should therefore be defined before committing to a diagnosis or definitive treatment.

Accurate diagnosis can guide hysteroscopic assessment, laparoscopic repair or other appropriate management.

CLINICAL PEARL

Cyclical brown discharge + a cystic lesion at a previous caesarean scar should trigger assessment of both scar endometriosis and an isthmocele.

KEY IMAGING QUESTIONS

01 IS THERE A SCAR DEFECT?

Confirm the niche/defect in the lower uterine segment.

02 WHAT DOES IT CONTAIN?

Fluid or altered blood can produce a misleading endometriosis-like appearance.

03 WHERE DOES IT COMMUNICATE?

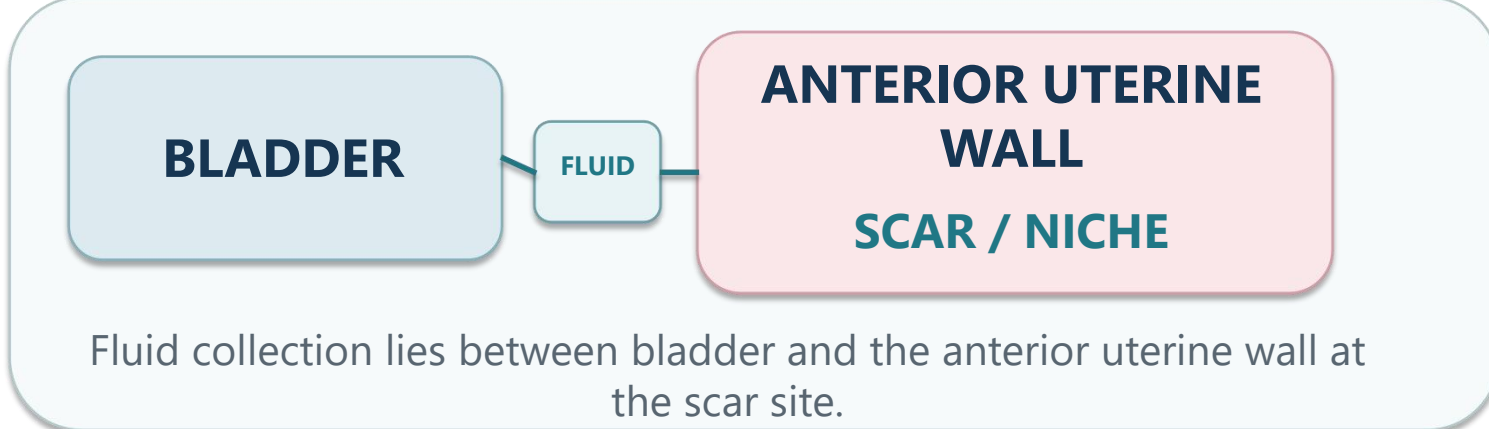
Define the relationship to the endometrial cavity, myometrium and bladder.

DIAGNOSTIC EVOLUTION

Initial ultrasound findings

- Small caesarean scar defect in the lower uterine segment.
- Fluid collection between bladder and anterior uterine wall.

SCHEMATIC ANATOMICAL RELATIONSHIP



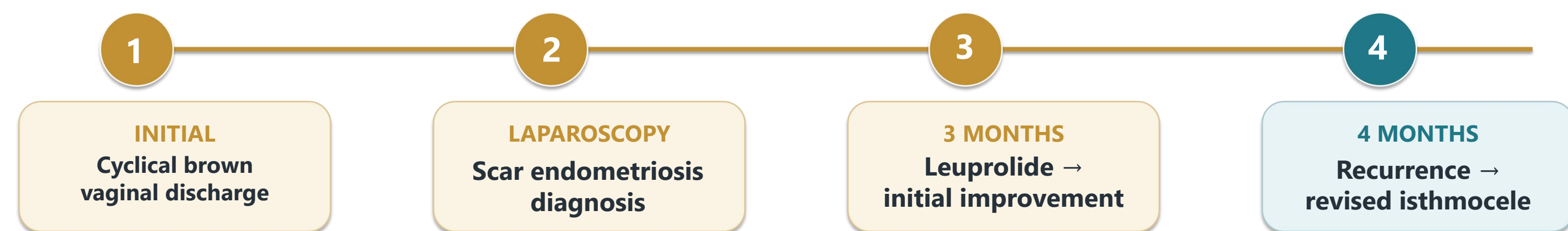
LAPAROSCOPY & INITIAL TREATMENT

Laparoscopy led to an initial diagnosis of caesarean scar endometriosis.

Treatment included sac aspiration, fulguration and application of Surgicel Snow.

Leuprolide acetate was administered for 3 months, with initial symptom improvement.

CLINICAL COURSE



REPEAT ULTRASOUND & REVISED DIAGNOSIS

Persistent caesarean scar defect → revised diagnosis of ISTHMOCELE

Brown discharge recurred 4 months later, although reduced in quantity.

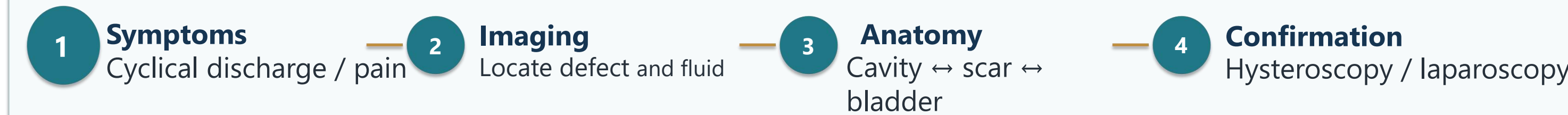
The persistent defect on repeat ultrasound shifted the diagnostic emphasis from scar endometriosis to isthmocele.

PLANNED NEXT STEP

COUNSELLING

- Hysteroscopic evaluation of the scar defect.
- Possible laparoscopic uterine wall repair, depending on anatomical findings.

A PRACTICAL DIAGNOSTIC APPROACH

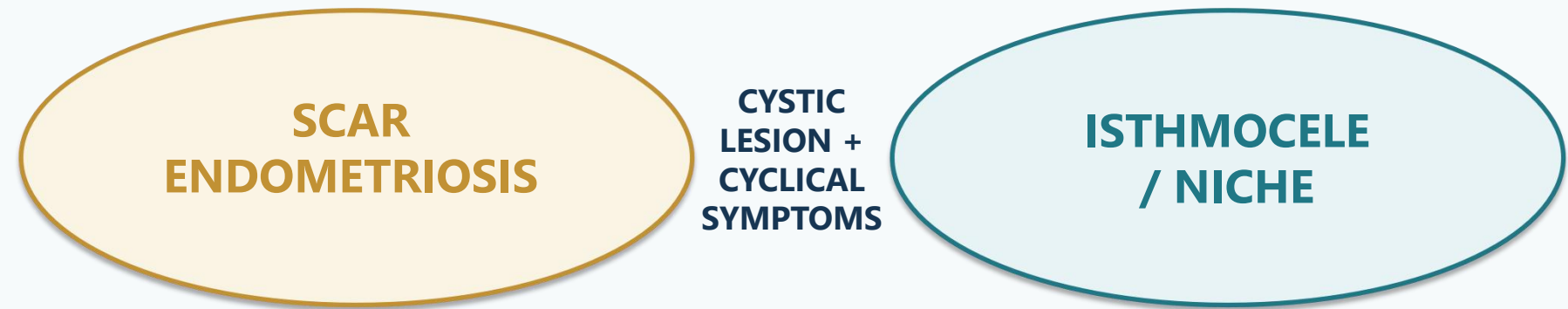


DISCUSSION

WHERE IS THE DIVIDING LINE?

- An isthmocele is a structural defect of the caesarean scar with communication to the endometrial cavity.
- Scar endometriosis is ectopic endometrial tissue within or around the surgical scar.
- Cyclical brown discharge and a cystic lesion containing chocolate-coloured material can mimic scar endometriosis.
- The anatomical relationship of the lesion to the uterine cavity and scar remains central to diagnosis.

THE OVERLAP



CLINICAL IMPLICATIONS

- Isthmocele is associated with abnormal uterine bleeding, chronic pelvic pain and infertility.
- Persistent scar defects may remain despite symptomatic improvement with medical therapy.
- Careful uterine wall closure during caesarean section may help prevent scar niche formation.
- Imaging should define the defect, its contents and its relationship to the bladder and uterine cavity.

MANAGEMENT IN THIS CASE

Initial:

Sac aspiration, fulguration and Surgicel Snow; followed by 3 months of leuprolide acetate with initial symptom improvement.

After recurrence:

Counselling for hysteroscopic evaluation and possible laparoscopic uterine wall repair.

CONCLUSION

This case highlights the diagnostic overlap between caesarean scar niche and scar endometriosis. A cystic lesion containing chocolate-coloured material at the previous caesarean scar, particularly with cyclical symptoms, may clinically mimic scar endometriosis even when it represents an atypical caesarean scar defect. Careful assessment of the anatomical relationship and, where necessary, laparoscopic/hysteroscopic evaluation is important in establishing the diagnosis and guiding management.

TAKE-HOME MESSAGE

When a post-caesarean cystic lesion presents with cyclical symptoms, do not assume endometriosis alone. Define its relationship to the uterine cavity and scar defect.

KEYWORDS : Endometriosis • Caesarean section • Laparoscopy • Hysteroscopy • Isthmocele