

Introduction

Definition: Isthmocele is a myometrial defect (uterine niche) in the anterior uterine wall, typically resulting from caesarean incisions or uterine surgery

Complications: Commonly associated with abnormal uterine bleeding, infertility, uterine rupture; rare in patients without surgical history .

Unique Case: Presents a spontaneous isthmocele in a 30-year-old multiparous woman with no prior uterine intervention.

Case presentation

Patient: 30-year-old multiparous woman, term breech, no history of uterine surgery.

Intraoperative Finding: A 3×3 cm sac-like protrusion on the anterior uterine wall under the broad ligament, consisting only of peritoneum—no myometrium visible.

Diagnosis: Unexpected isthmocele discovered during elective category 4 C-section at term.

Management

- Surgical team feared potential rupture
- The pouch incised, revealing a chronic, attenuated cavity
- Two-layer repair with absorbable sutures to reconstruct uterine integrity
- No intraoperative complications; postoperative recovery was uneventful

Discussion

Uterine isthmocele, often termed a "niche," is a myometrial defect typically linked to prior lower segment cesarean section (LSCS) or uterine surgery. It usually results from inadequate healing at the site of uterine incision, leading to myometrial thinning or dehiscence. Patients may remain asymptomatic or present with abnormal uterine bleeding, dysmenorrhea, infertility, or, in rare instances, uterine rupture in subsequent pregnancies. The majority of published data focus on isthmocele as a post-cesarean complication, and its management ranges from conservative monitoring to surgical correction, particularly in symptomatic or fertility-seeking patients. In contrast, **spontaneous isthmocele**—as reported in this case—is exceptionally rare, with very few cases described in the literature. The absence of previous uterine instrumentation or cesarean section in our patient rules out acquired causes. This raises questions about **congenital myometrial defects**, possibly due to localized developmental anomalies in uterine wall musculature. Other possible but unproven factors include ischemic injury during prior vaginal deliveries, subclinical infections, or minor trauma that went unrecognized. The intraoperative discovery of a thin, ballooned-out pouch on the anterior uterine wall, covered only by peritoneum, highlighted the imminent risk of rupture had this defect gone unnoticed. Preoperative imaging (ultrasound or MRI) often fails to detect such thin-walled defects unless specifically indicated, reinforcing the role of **intraoperative vigilance**. Prompt identification and two-layer repair of the defect restored the uterine contour and likely reduced the patient's risk of future uterine rupture. Importantly, this case underscores a need for **heightened awareness** among obstetricians during routine cesarean deliveries, especially when atypical anatomy is encountered. Future pregnancies in patients with a repaired isthmocele require thorough counseling and planned delivery via elective cesarean section to avoid catastrophic rupture. Further research is essential to understand the **etiopathogenesis** of spontaneous isthmoceles, their long-term reproductive implications, and the role of surveillance imaging during antenatal care in high-risk or multiparous women.

Conclusion

- **Rare case of spontaneous isthmocele successfully identified and repaired during caesarean section**
- **Highlights need for surgical awareness and intraoperative assessment**
- **Patient advised for planned repeat CS in future**
- **Further research needed to clarify aetiology and optimal management strategies**

References

- **The sources for such a case were very limited during our search. However, we managed to collect some data from the following references;**
- **onnez, O., et al.**
Prevalence of cesarean scar defects in women with secondary infertility: diagnostic accuracy of sonohysterography vs MRI. Fertility and Sterility, 2017; **107(2): 430–435**.
doi:10.1016/j.fertnstert.2016.10.030
- **Tower, A. M., Frishman, G. N.**
Cesarean scar defects: an underrecognized cause of abnormal uterine bleeding and other gynecologic complications. Journal of Minimally Invasive Gynecology, 2013; **20(5): 562–572**.
doi:10.1016/j.jmig.2013.03.008

Figure 1: Isthmocele

