

An intra-operative surprise – a case report of Retroperitoneal Mullerian Cyst

Authors: P Dann, P Kotabagi, K Raynsford, S Doshi

Kettering General Hospital, University Hospitals of Northamptonshire NHS Group

Objective:
To describe a retroperitoneal cyst, identified unexpectedly intra-operatively. Retroperitoneal cysts are rare with incidence of 1/5750 to 1/250,000; one third are asymptomatic and incidental findings.

Case report:

- A 50-year-old patient presented acutely with abdominal pain.
- CT imaging showed small bowel obstruction (managed conservatively) and incidentally a large left adnexal cystic lesion; simple, without septations, wall thickening or solid components.
- Pelvic ultrasound reported a left adnexal cyst (82x80x75mm), containing low-level echoes, without vascularity; not identifying the left ovary separately.
- CA 125 was 11.
- Gynaecological assessment suspected an endometriotic cyst and multidisciplinary review advised a laparoscopic bilateral salpingo-oophorectomy.

Laparoscopic findings:

- Arising from the left adnexa was a large, benign-appearing mass, measuring approximately 10cm in size.
- The cyst size and adhesions (peritoneal and omental) distorted the pelvic anatomy, obscuring complete assessment of the pelvis; prompting the decision to convert to open.

Open surgery:

- A Pfannenstiel incision offered adequate access to the pelvis.
- Blunt exploration and adhesiolysis revealed the cyst's retroperitoneal origin, separate to the left ovary and adherent to the pouch of Douglas and left internal iliac artery.
- The left pelvic sidewall was opened, identifying the iliac vessels and ureter. The cyst ruptured spontaneously, releasing clear fluid and then the cyst wall subsequently peeled from the retroperitoneum.
- As both ovaries were normal, there was no indication for removal.
- Post-operative recovery was uneventful.

Histology:

- Histological examination revealed a benign mullerian cyst. No further follow-up was arranged.

Conclusion:

This report describes the removal of an unknown structure, classified at histological examination. It questions operative approach and highlights surgical vigilance. When unexpected intra-operative findings occur, anatomical principles and systematic approaches must be applied to achieve successful outcomes without complications.

Pre-operative imaging:



Figure 1: CT image showing a left adnexal cystic lesion without any sinister features. Differential diagnoses from this imaging included: haemorrhagic cyst, endometrioma or cystadenoma

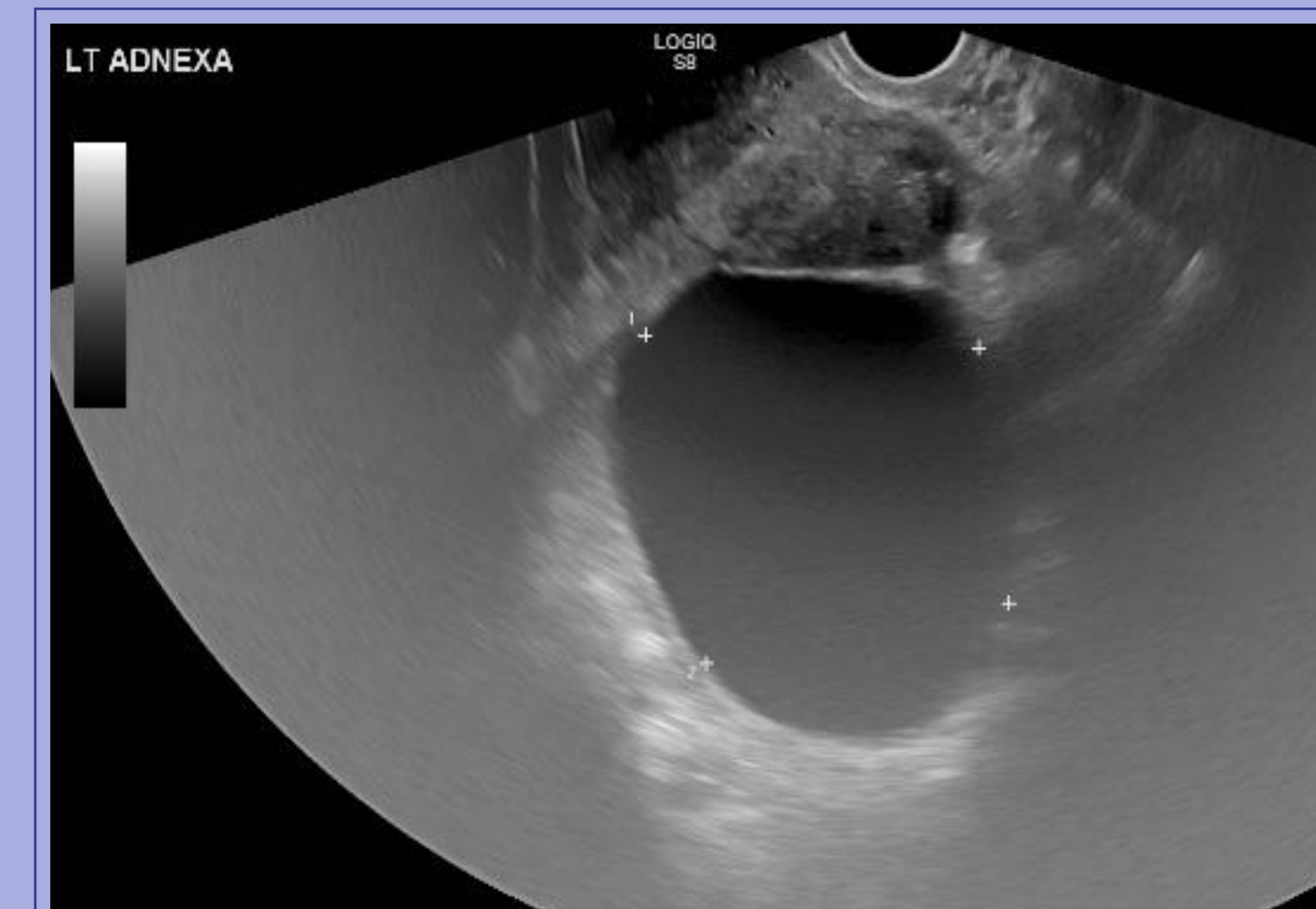


Figure 2: Ultrasound image showing a left adnexal cyst measuring 82x80x75mm, containing low level echoes

Laparoscopic findings:



Figure 3: Laparoscopic image showing the abdomino-pelvic mass with peritoneal adhesions

Discussion:

Retroperitoneal mullerian cysts are remanent of the mullerian duct, diagnosed pre-operatively in 25% of cases. They are generally serous, benign and can grow to large sizes or recur in incomplete excision. The pathogenesis is unknown, however oestrogen stimulation is hypothesised as a cause.

The multidisciplinary opinion, suspecting an ovarian cyst, suggested laparoscopic surgical removal. Success of this laparoscopic approach may be dependent on surgical skillset, however removing large cystic structures intact, through laparoscopic ports often poses challenge. If the pathology had been malignant, cyst content spillage would have affected staging.

Decision making about the surgical approach should ensure the incision achieves **adequate access** and intact specimen retrieval. Operative technique should consider: **surgical skill**, **operating time** and **specimen retrieval**. Consent should include the risk of open surgery.

Retroperitoneal masses can mimic other pelvic structures, proving that imaging cannot always offer diagnostic certainty. Operating within the retroperitoneum can be challenging, requiring anatomical knowledge and surgical precision and exploration of this anatomical area may not be commonly practised by benign gynaecologists.