

The management of large bilateral recurrent benign mucinous cystadenomas of the ovary

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Introduction

Mucinous tumours of the ovary are the second most common type of epithelial tumours and represent a spectrum of neoplastic disorders(1). Among these, ovarian mucinous cystadenomas account for 15% of all ovarian tumours and only 5 – 10% of these are bilateral(2). The recurrence of mucinous cystadenomas is very rare and the recurrence of such cysts bilaterally even more so.

This case report describes the management of large bilateral recurrent benign ovarian mucinous cystadenomas in a young female who presented to our gynaecology department. Additionally, this case report considers the impact on future fertility for a nulliparous young female with a history of repeated adnexal surgeries for these tumours.

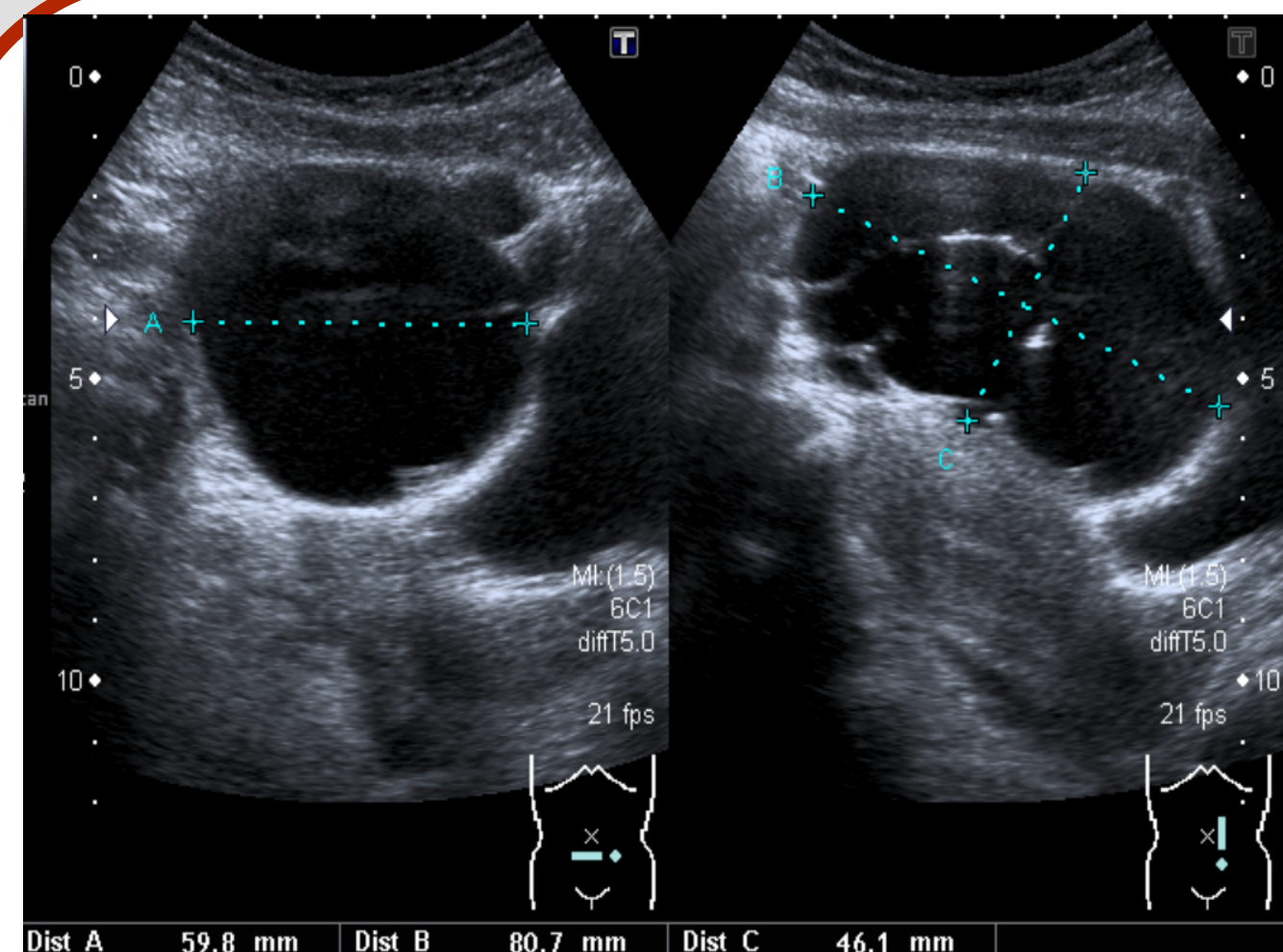


Figure 1. USS showing a 8.1 x 6 x 4.6 cm complex cystic structure within the midline of the pelvis at first attendance



Figure 2. MRI pelvis showing a multiloculated 7.3 x 8 x 8cm left ovarian cyst with thin septations throughout

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Case report

A 16-year-old nulliparous female was admitted with persistent lower abdominal pain and bloating. She had a past medical history of irritable bowel syndrome and migraines. She was a smoker with a BMI of 36 and was on the Microgynon combined contraceptive pill. A pelvic ultrasound scan (USS) showed large complex ovarian cysts (Figure 1). She was seen in fast track clinic and a subsequent pelvic magnetic resonance imaging showed large bilateral cystic and multiloculated adnexal masses measuring 7.3 x 8 x 8cm and 8.6 x 10cm arising from her left and right ovaries respectively (Figure 2). Her tumour markers (CA-125, CEA, CA19-9, AFP, β -hCG) were normal. Subsequently, an open bilateral ovarian cystectomy with peritoneal washing was performed. Histology confirmed bilateral benign mucinous cystadenomas with no evidence of atypia or malignancy.

The patient re-presented 5 years later with similar symptoms and a pelvic USS showed a 5.4cm right ovarian cyst containing loculations with some solid areas and a 5cm left ovarian simple cyst. Tumour markers were again normal. A laparoscopic ovarian cystectomy was performed for the recurrence of 6cm benign mucinous cystadenomas on both ovaries (Figure 3).

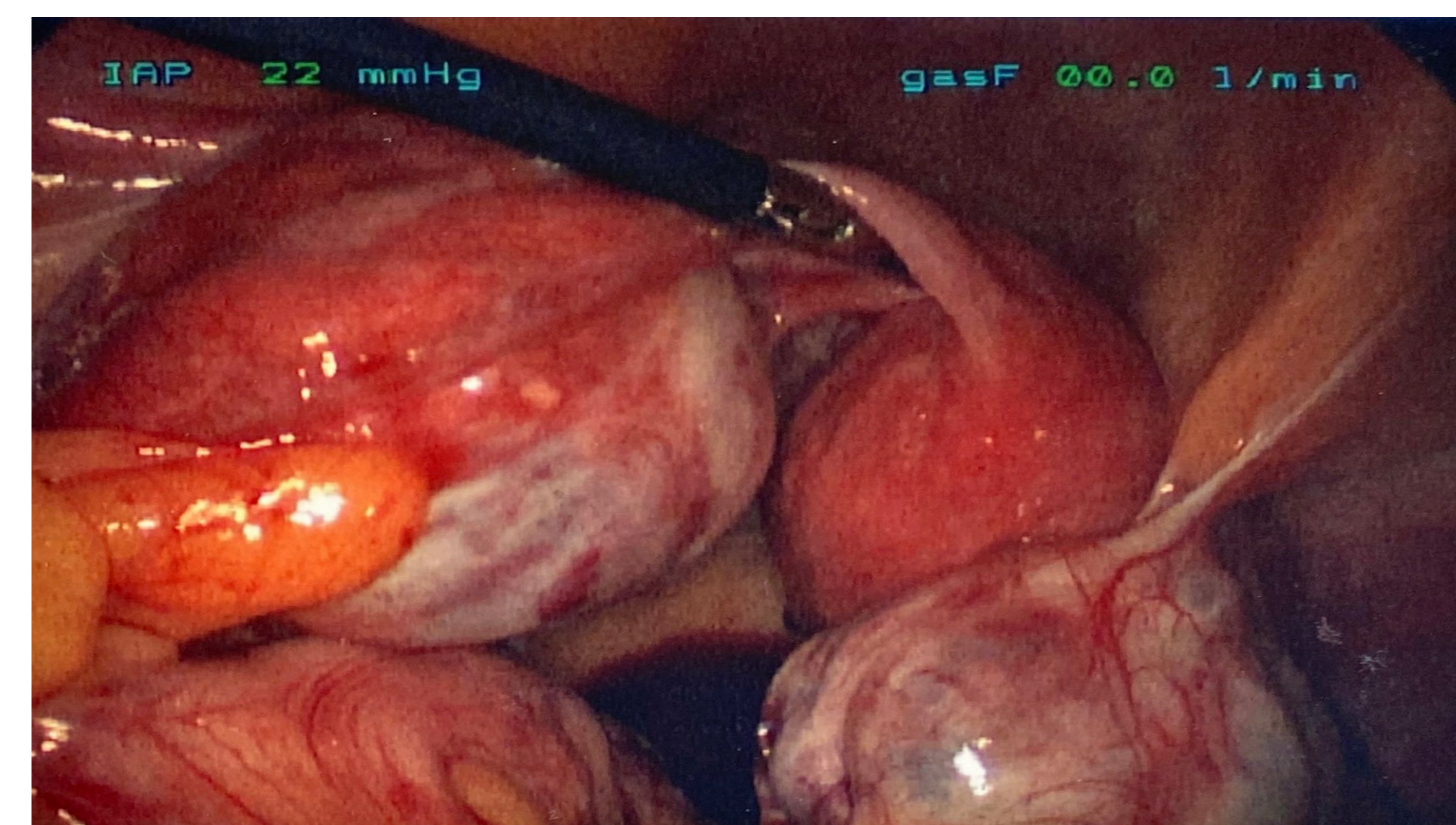


Figure 3. Laparoscopic view of bilateral mucinous cystadenoma at second recurrence

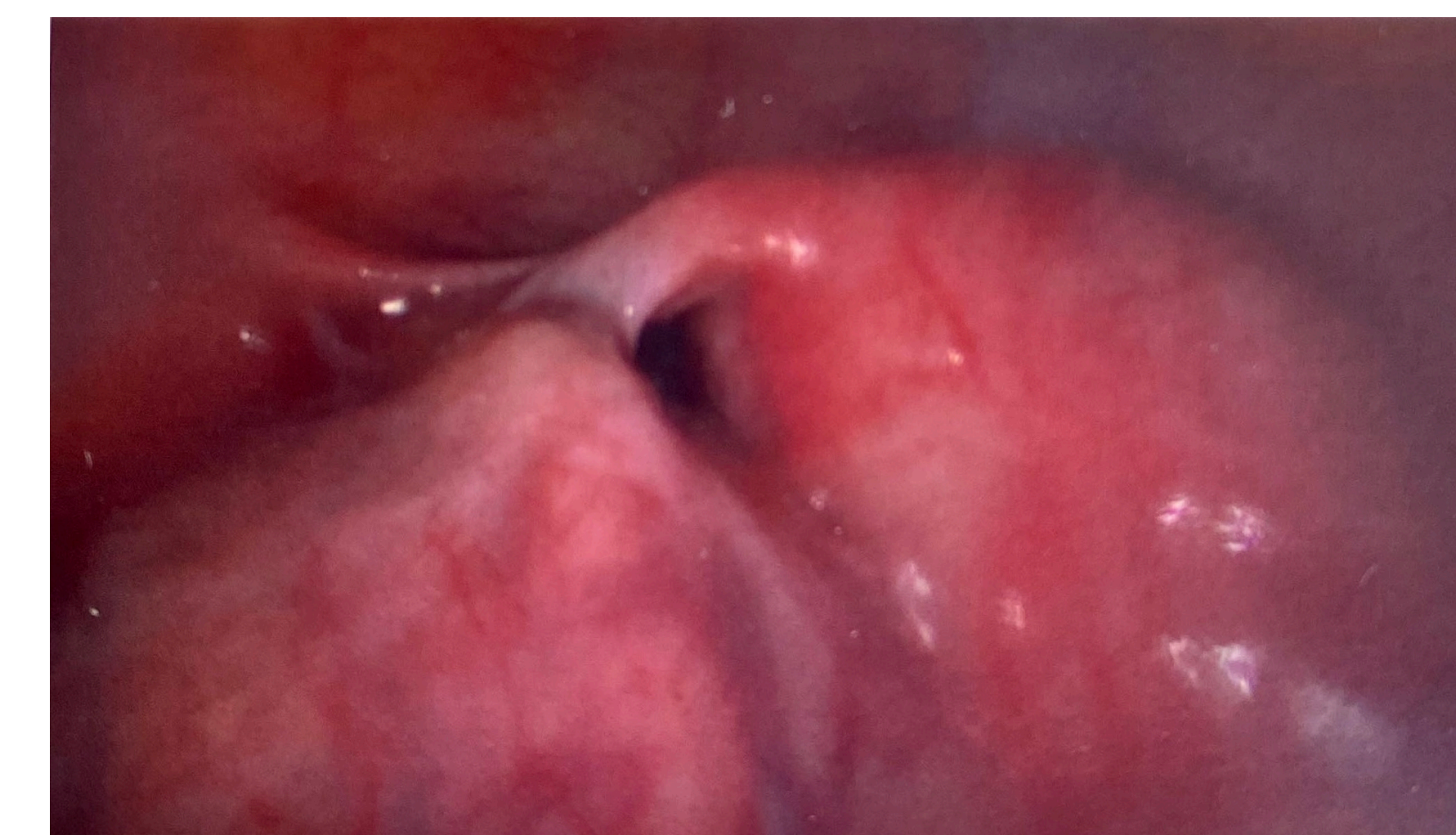


Figure 4. Laparoscopic view of left mucinous cystadenoma at third recurrence, 110mm in maximum dimension

Due to the nature of this recurrence, a follow up with periodic transvaginal USS was planned. Six months later, she developed an 8cm loculated right ovarian cyst and a 7cm simple left ovarian cyst. Tumour markers were again normal. She subsequently had a repeat laparoscopic bilateral ovarian cystectomy and adhesiolysis with histology again confirming bilateral benign mucinous cystadenoma (Figure 4). In view of her age and repeated ovarian surgeries, she was referred to Sheffield fertility clinic to discuss oocyte cryopreservation with individual funding request.

Discussion

The recurrence of mucinous cystadenomas is very rare and only eleven cases have been reported worldwide until now(3). Of these recurrences, only two cases were bilateral recurrences(1,4). As these cysts are non-functional, hormonal medication is unlikely to be effective therefore laparoscopic resection is the preferred management(2). The management of young patients is challenging, especially with regards to preserving fertility in cases of recurrence. A conservative approach with ovarian cystectomy is preferred in patients wishing to retain their fertility to maximise retention of functioning ovarian tissue(5). However, conservative approaches can be difficult with large cysts. It is important to discuss the impact of multiple adnexal surgeries and considerations should be made to refer patients for oocyte cryopreservation for preservation of fertility. It is important to be aware of local fertility treatment funding eligibility criteria as some clinical commissioning groups may not provide NHS funding for such cases, and individual funding may be required. Additionally, the timing of oocyte cryopreservation must be carefully considered. Ovarian stimulation and oocyte collection must be done as an interval procedure when the ovaries are normal to avoid the risk of cystadenoma perforation.

Conclusion

Surgical management with sufficient surgical excision can be effective for large benign ovarian mucinous cystadenomas, however these can recur. Laparoscopy should aim to minimise damage to ovarian reserves by avoiding diathermy and using haemostatic agents. Close surveillance of post-cystectomy patients with transvaginal USS is crucial in their long-term management(1). Early detection of recurrences allows conservative and laparoscopic management before cysts become excessively large. In particular, consideration needs to be made about the impact of repeated surgical management on fertility, especially in cases of young females, recurrent cysts or bilateral cysts.