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Case Report

Recurrent bilateral ovarian dermoids, co-occurring with multiple large benign cystadenomas, and a functional cyst; managed by minimally invasive surgery - A rare case report

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ABSTRACT

Benign ovarian cysts comprise a majority of all ovarian masses presenting in women. Apart from functional cysts, dermoid cysts and benign cystadenomas are responsible for significant morbidity. Recurrent ovarian dermoid cysts are uncommon and attributed to incomplete surgical excision. Multiple benign cystadenomas, along with other large benign ovarian tumors arising from single ovary, are an extremely rare occurrence. We present a case with recurrent bilateral ovarian dermoids, co-occurring with multiple large benign cystadenomas from one ovary. This case was managed by laparoscopic surgery with successful enucleations and cystectomies. There are no such cases reported in the literature to the best of our knowledge. We also describe the various challenges in such surgery and implications of various surgical techniques.

Keywords: Ovarian cysts, Cystadenoma, Recurrence dermoid, Laparoscopy

INTRODUCTION

Benign ovarian cysts comprise 80% of all ovarian masses presenting in women of reproductive age group. Most common ovarian neoplasms are surface epithelial tumors and amongst them, the most common are benign cystadenomas, of which 75% are serous cystadenomas and 25% are mucinous cystadenomas.^[1]

Dermoid cysts account for 20-35% of total benign ovarian cysts. These are tumors arising from totipotent germ cells in ovary, a presentation commonly seen in young girls. Bilateral presentation can be seen in 10-15% of cases of dermoid cysts.^[2] Recurrence of ovarian dermoid is believed to be rare. Incidence of recurrence of ovarian dermoid is 2.5%.^[3] Recurrence is also attributed to incomplete excision of the cyst during primary surgery.

There have been reports of synchronous occurrence of a mucinous cystadenoma and a serous cyst present one in each ovary from patients presented to gynecological OPD.^[4-6] The presence of

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multiple large benign cysts of different pathogenesis in one ovary is an extremely rare presentation.^[4,7]

We present a case of dermoid cyst, mucinous cystadenoma, multiple serous cysts, and corpus luteal cyst—all in the right ovary along with a dermoid cyst in the left ovary as well. The patient underwent successful enucleation of these cysts laparoscopically. We also describe the challenges in such surgery and implications of various surgical techniques.

CASE REPORT

A 22-year-old unmarried lady presented with a dull aching, intermittent lower abdominal pain. Menstrual cycles were regular and there was no dysmenorrhea. She had undergone laparoscopic

excision of a right ovarian dermoid cyst 5 years back. Abdominal examination revealed mild tenderness in the right iliac fossa. Per vaginal examination was not performed.

Pelvic ultrasound revealed a right ovarian dermoid cyst measuring 6.8 × 5.4 × 4.5 cm and left ovarian dermoid cyst measuring 3.0 × 2.5 × 2.5 cm. Routine investigations were normal and CA - 125 was 55 IU and normal. Anti mullerian hormone (AMH) 3.8 was also normal.

Laparoscopic surgery was performed after complete pre-anesthetic check-up and detailed written and informed consent.

Laparoscopic cystectomies was achieved with complete enucleation of all the cysts and retrieval of the cyst walls.

Figure 1 shows bilateral ovarian dermoid cyst.

Figure 2 shows multiple right ovarian cysts of various pathologies. There were total seven cysts, enucleated from the right ovary.

Figure 3 shows all the enucleated cysts and laparoscopic suturing and closing the dead space.

The findings of all the cysts removed serially were confirmed on histopathology.

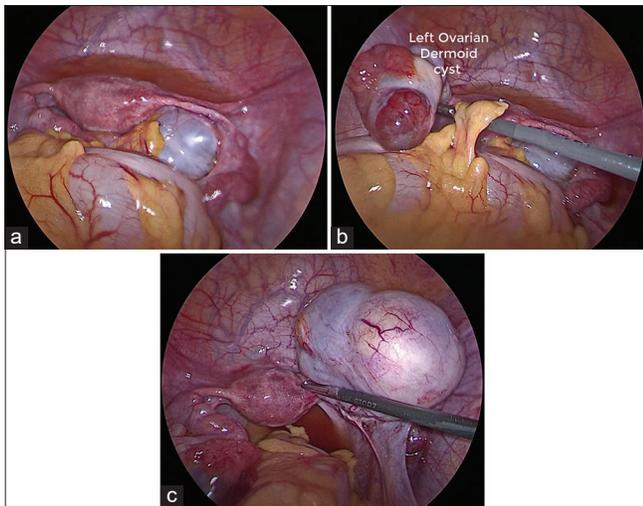


Figure 1: (a) Initial picture of the pelvis on entry by laparoscope, showing large ovarian mass on right side, (b) Left-sided ovarian dermoid cyst, (c) Right ovarian mass in Toto.

DISCUSSION

Diagnosis on imaging techniques, especially ultrasonography is largely technology and personnel dependent. It is not uncommon that the type, sizes, and numbers of ovarian cysts are misdiagnosed.

There are numerous case reports of bilateral presentations and multiple dermoid cysts.^[2] Comerchi *et al.* reviewed a large number of cases of mature cystic teratoma of ovaries, (dermoid tumors) and found that 10.8% were bilateral.^[3]

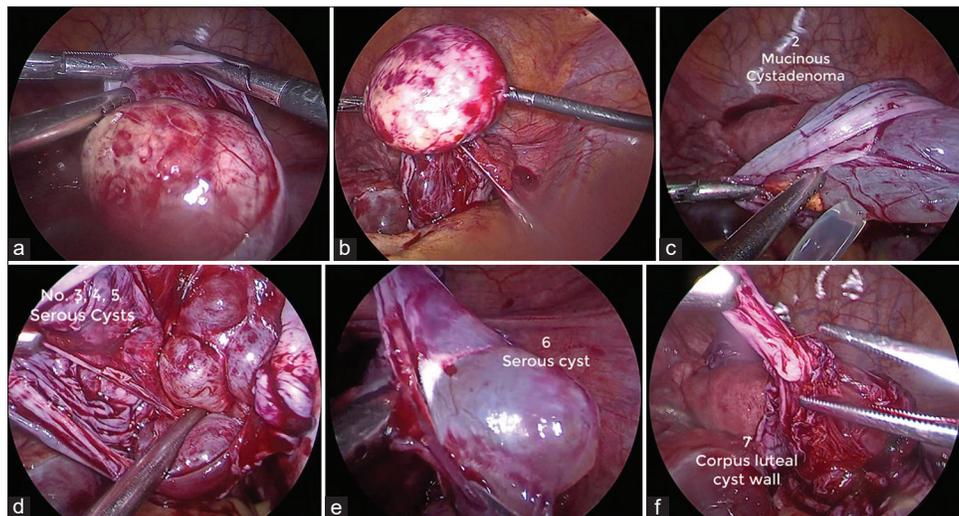


Figure 2: (a) Use of suction cannula for dissection and enucleation, (b) complete enucleation of dermoid cyst (1), (c) mucinous cystadenoma (2), (d) Multiple serous cystadenomas (3,4,5), (e) Serous cyst (6), (f) Corpus luteal cyst (7).

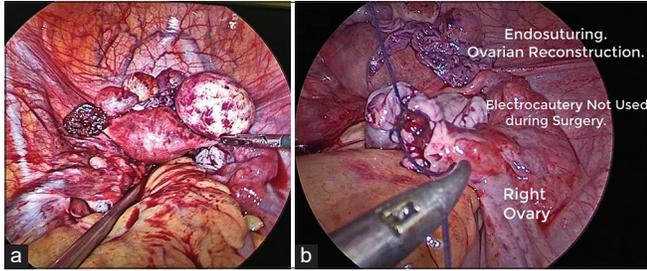


Figure 3: (a) Complete picture of all the cysts on completing cystectomies, including left dermoid cyst. (b) Laparoscopic suturing.

A case report by Baradwan *et al.* from Saudi Arabia and two case reports from India, Mondal *et al.* and Sethi *et al.* demonstrated the synchronous presence of benign cystadenomas of different types in each ovary from the patient.^[4,5,7]

Co-occurrence of multiple benign cystadenomas, dermoid cyst, and a functional cyst together in an ovary is an extremely rare phenomenon. This was seen in the present case.

In this case, “multiple cysts in the right ovary” were observed during surgery. As pre-operative ultrasonography had suggested solitary right-sided dermoid cyst, we had challenges of enucleation of many cysts and of different types. We also noted the fibrotic and adherent nature of cyst walls over the ovarian cortex, probably attributable to scarred ovarian surfaces due to ovarian surgery the past.

We suggest the use of a laparoscopic suction cannula, as an effective tool for dissection among cysts and from ovarian surfaces, instead of the conventional and routine practices of dissection by plain or toothed laparoscopic graspers followed by peeling of the cyst wall after rupturing the cysts, or sharp dissection by electrocautery or cold scissors.

The use of a suction cannula promotes complete enucleation of the cysts without rupturing them which is of utmost importance in dermoid cyst surgery. Avoidance of electrocautery over ovarian surfaces also helps us to preserve the so-called “ovarian reserve.”

Meticulous and thoughtful efforts during surgery will prevent the recurrence of the cysts and, hence, will prevent repeat ovarian surgery, on this young and fertile woman.

CONCLUSION

Occurrence of multiple ovarian cystadenomas is a rare phenomenon. A detailed pre-operative work-up is of utmost

importance. A laparoscopic approach is preferred but the use of electrocautery on the ovary should be discouraged in young patients in view of fertility preservation.

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Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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