

Correspondence

Ovarian cancer presenting as an acute abdomen was successfully diagnosed and managed by laparoscopy

A 42-year-old, gravida 2, para 2 woman had suffered from abdominal pain for 1 day. Her history includes two cesarean sections, and a 4-year experience of dysmenorrhea. She was diagnosed accidentally to have a 6-cm ovarian tumor favoring the diagnosis of chocolate cyst (endometrioma) 6 months ago. Her last menstruation date was 29 days ago; therefore, she considered this acute abdominal pain as dysmenorrhea since this attack was accompanied with menstruation.

Transvaginal ultrasound revealed an $80 \times 75 \times 80$ mm cyst with little echogenicity on the right adnexal area. Her urine pregnancy test was negative. Other laboratory examinations were within normal limits, except for leukocytosis of 12,300.

Diagnostic and therapeutic laparoscopy was suggested due to failed response to pain-relieving medication after a 24-hour observation, and clinical diagnosis was the suspicious ruptured or twisted right ovarian chocolate cyst. Laparoscopy showed a dark-red cystic lesion covered by the surrounding omentum. After carefully dissecting the tumor from the surrounding omentum, the diagnosis of tubo-ovarian torsion was made.

Then, laparoscopic salpingo-oophorectomy was performed with complete removal of the intact tumor using a cellulose bag through an enlarged umbilical wound. Frozen pathology favored benign ovarian tumor. However, the final pathology showed mucinous ovarian cancer grade 2. After a careful and thorough discussion and postoperative evaluation, the patient received four-course adjuvant chemotherapy with a combination of paclitaxel and carboplatin, and has been disease-free for 59 months so far.

In this case report, the following interesting issues are raised. First, we completely agree with Dr. Lee's previous comment that great advances in technology offer meticulous options of minimally invasive surgery to empower the gynecologists to manage patients with early ovarian cancer [1], although this issue is still highly debated. Recent studies only suggested that laparoscopic surgery might be used in the management of endometrial cancers, especially type I endometrial cancer (endometrioid carcinoma of the uterus) and/or early-stage cervical cancers, which had better be limited to IB1 and tumor size better be less than 2 cm [2,3]. By contrast, the development of robot-assisted laparoscopy system might

overcome the technical limitations in conventional laparoscopy, and provide an opportunity in the management of difficult gynecologic surgeries [4,5], including gynecological cancers [6,7].

Second, is surgical restaging indicated in apparent stage IA epithelial ovarian cancer? To respond to this question is not easy. During primary surgery for advanced-stage epithelial ovarian cancer, all attempts should be made to achieve complete cytoreduction, since women with residual disease <1 cm still do better than women with residual disease >1 cm [8]. When this is not achievable, then the surgical goal should be optimal (<1 cm) residual disease [8]. However, this application might not be appropriate for apparent stage IA epithelial ovarian cancer, since postoperative adjuvant chemotherapy seems to improve the outcome of patients with early-stage epithelial ovarian cancers, even though these patients were treated with fertility-sparing surgery [9].

We conclude that although reoperation is suggested in the majority of patients with accidental diagnosis of ovarian malignancy, for highly selected patients, including those with apparent stage IA epithelial ovarian cancer, removal of the intact tumor without malpractice or overmanipulation, postoperative adjuvant chemotherapy, and good compliance of close follow-up, laparoscopic surgery might not compromise the outcome of these patients.

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