



## Correspondence

## Ovarian fibrothecoma mimicking ovarian cancer: Using laparoscopy to avoid unnecessary exploratory laparotomy



Massive ascites accompanied with ovarian mass lesion is often a big challenge for both physicians and patients [1]. Due to absence of consensus or agreement of the using minimally invasive surgery (MIS) in the diagnosis and/or management of patients with clinical and/or laboratory suspicion of epithelial ovarian cancer (EOC) [2–4], exploratory laparotomy is often considered as a safe way. However, malignancy is not always existed, contributing to the development of much more sensitive and specific tools to overcome this limitation. Among these, laparoscopy might be a candidate [5]. Unfortunately, recent studies have raised the concerns of oncology safety in the use of laparoscopy in the management of certain-type of gynecological cancers, although some arguments are still present [6,7].

Similar to cervical cancer as shown above, there is no agreement to use laparoscopy as a tool for diagnosis and/or treatment diagnosis [8], although there is more and more evidence to support the role of the laparoscopy not only for diagnosis but also for management of EOC [2,3,9,10]. Compared to image, laparoscopy can quantify the tumor extent in the abdomen and the involvement of the peritoneum more accurately, and provide a much precise and reproducible Sugarbaker's Peritoneal Carcinoma Index (PCI) [2,9,10].

For those women with non-gynecological malignancy-related ascites, including endometriosis, stromal hyperplasia, fibroma, ruptured ovary, ovulation-induced ovarian hyperstimulation syndrome, and peritoneal tuberculosis, many patients finally ended by exploratory laparotomy if omission occurs. The following is a frequent and typical case to show this dilemma in accurate diagnosis.

A 42 years-old female with history of gravid 2, parous 2, Caesarean section twice; regular menstrual cycle with duration of 5 days and interval of 28 days had an incidental finding of an elevated serum tumor marker of CA-125 (306 U/ml) and a 8-cm right pelvic adnexal mass accompanied with ascites. After well-informed and thorough discussion the patient persisted to undergo laparoscopic surgery. During operation, besides the right adnexa mass, hydrosalpinx and massive ascites, there was no evidence of other intraperitoneal lesion. Laparoscopic salpingo-oophorectomy was done and final pathology revealed ovarian fibrothecoma. Post-operative status was uneventful and the patient was discharged on the next day after laparoscopy.

The case is interesting and worthy of discussion. First, the pre-operative diagnosis in this patient was difficult. Tools in routine clinical practice, such as images and tumor markers seemed to fail to distinguish benign from malignant disease. Second, the

advantages of laparoscopy seemed to be further confirmed in this case, because of making an accurate diagnosis in this uncertain clinical situation and providing a better therapeutic plan. Third, although Meigs' syndrome is often secondary to ovarian fibroma [11], other types of ovarian stromal tumors can be accompanied with massive ascites (pseudo Meigs' syndrome).

## Declaration of competing interest

The authors declare that they have no competing interests.

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