Correspondence

A rare malignant transformation of endometriosis

A 48-year-old female was admitted to our hospital with worsening anal heaviness, distension and dull pain in the lower abdomen for 4 months, and abnormal defaecation for 10 days. Bilateral ovarian endometriosis cyst excision had been performed 9 years previously. Physical examination revealed: (i) an obviously thickened and contracted right sacro-ilac ligament in nodular shape with a size of ~4*4 cm², protruding to the right pelvic wall; and (ii) a touchable mass of ~8*7 cm² within the rectovaginal septum, compressing the vagina forwards and the rectum backwards. Pelvic magnetic resonance imaging revealed: (i) a cystic solid mass in the left ovary and a mass in the recto-uterine pouch, which were considered to be ovarian tumours; (ii) involvement of the uterine and rectal serosa; (iii) encapsulated effusion in the back of the right pelvic cavity; and (iv) tumour metastasis in the periperitoneal region (Fig. 1A). Laboratory examination showed that the levels of neuron-specific enolase and human epididymis protein 4 were 22.25 ng/mL and 205.00 pmol/l, respectively. A diagnosis of possible endometriosis-associated malignancy (EAM) was made. The patient was treated successfully with hysterectomy, bilateral adnexa resection and vagino-rectal septum tumour resection. Postoperative pathological examination indicated: (i) clear cell carcinoma in the left ovarian tissue; (ii) clear cell ovarian cancer originated from endometriosis in the left attachment; and (iii) left ovarian...
endometriosis (Fig. 1B). Examination of the tumour in the vagina-rectal septum revealed endometriosis-related non-clear-cell vaginal adenocarcinoma with a histologic type of endometrioid carcinoma, highly differentiated (Fig. 1C).

Although endometriosis is a benign disease, it has biological characteristics similar to malignant tumours, such as excessive proliferation, invasion, adhesion, angiogenesis and high recurrence [1]. Approximately 0.7–1% of patients are at risk of malignant transformation. EAM is divided into three subtypes: Type I (ovarian endometrioid, clear cell and seromucinous carcinomas), Type II (Mullerian tubular mucinous borderline tumours and serous borderline tumours) and Type III (adenosarcomas and endometrial stromal sarcomas). The most common histopathological type of EAM is clear cell carcinoma, followed by endometrioid ovarian cancer, and rare poorly differentiated serous ovarian cancer [2].

In this case, two types of malignant endometriosis with different histopathological types appeared simultaneously, both of Type I. It is possible for homologous cell malignant transformation to occur in the same person. However, the mechanism of EAM in postmenopausal women remains unclear. Oral contraceptives have been shown to inhibit the occurrence of ovarian cancer, but their effectiveness in EAM needs further research [3]. The patient had not been prescribed oral contraceptive maintenance treatment due to the obvious lack of symptoms following previous treatment.

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