



Research Letter

Massive vaginal hemorrhage caused by cervical endometriosis

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Dear Editor,

Cervical endometriosis, as a branch of endometriosis, has been reported rarely. Many patients were asymptomatic and diagnosed by histopathology incidentally, only a few cases showing irregular intermenstrual hemorrhage and persistent postcoital bleeding or even life-threatening hemorrhage [1,2]. Several theories have been put forward to explain the cause of cervix endometriosis. Hoang et al. hypothesized that cervical endometriosis could develop in Müllerian rests, which persist in the stroma of the cervix [3]. As Sampson's menstrual reflux and implantation theory has been used to account for endometriosis, the cervix may have chance to be implanted by endometrial debris to develop ectopic lesions, especially for the posterior lip [4]. Moreover, previous cervical trauma, such as cone biopsy, curettage and electrocautery, was widely accepted as a possible pathogenic pathway for endometriosis implantation [1]. The diagnosis of cervical endometriosis may be challenging since the clinical symptom and gross appearance were diverse. In this article, we report two cases of cervical endometriosis presented as massive vaginal hemorrhage.

Case one involves a 40-year-old Chinese woman presented with persistent massive vaginal bleeding for 8 h. Gynecological examination revealed persistent active vaginal bleeding seems from posterior lip of the cervix which was hypertrophy and soft. Both TVS and MRI revealed a heterogeneous cystic mass, without papillary proliferations or internal septa (Fig. 1A,B). Serum β -hCG and CA125 was within normal range, so as cervical smear. A 5-cm diameter cyst was found and the cystic wall was brown color with no papillary vegetations (Fig. 1C). Hysteroscopy examination

and conization of cervix were undertaken. Pathological diagnosis was confirmed as cervical endometriosis (Fig. 1D).

Case two involves a 41-year-old Chinese woman presented with prolonged menstruation periods for 1 year and persistent heavy vaginal bleeding for 6 months. The cervical lesion was diagnosed as endometrioma combined with endometrial mild hyperplasia as well as vaginal endometrial polyps. Colposcopy showed the posterior lip of cervix was covered by polypoid lesions and there was no obvious boundary with vaginal posterior wall (Fig. 2A). T2-weighted magnetic resonance image showing a polypoid mass in posterior lip of the cervix. (Fig. 2B). The serum level of CA125 was 322.1 U/mL. Histopathologic examination showed polypoid endometriosis of the uterine cervix and vaginal wall (Fig. 2C). Hysterectomy and bilateral salpingectomy were performed to release the symptoms.

Endometriosis is one of the most common benign gynecologic disorders. Little cervical endometriosis lesions exhibit as giant cysts or polyps, and history of vaginal delivery or cervical injury might have contributed to the formation of these rare lesions. Although the majority patients diagnosed as cervical endometriosis are asymptomatic, it may cause abnormal bleeding, including persistent postcoital bleeding and life-threatening vaginal hemorrhage [5]. The possible differential diagnoses are cervical pregnancy, adenocarcinoma, fibroid and other cervical lesions. Conservative excision related intermenstrual or postcoital bleeding relapse could be managed by surgery combined with GnRHa injection. The clinicians should pay attention to potential cervical incompetence afterwards.

In summary, cervical endometriosis is rarely reported to contribute to massive bleeding. Even so, the clinicians should pay attention to those few cases with severe symptoms to provide proper medical care timely. Whether surgery or medicine may depend on the clinical symptom, and the choice of operation methods may depend on the range of lesion and if it combined severe pelvic endometriosis.

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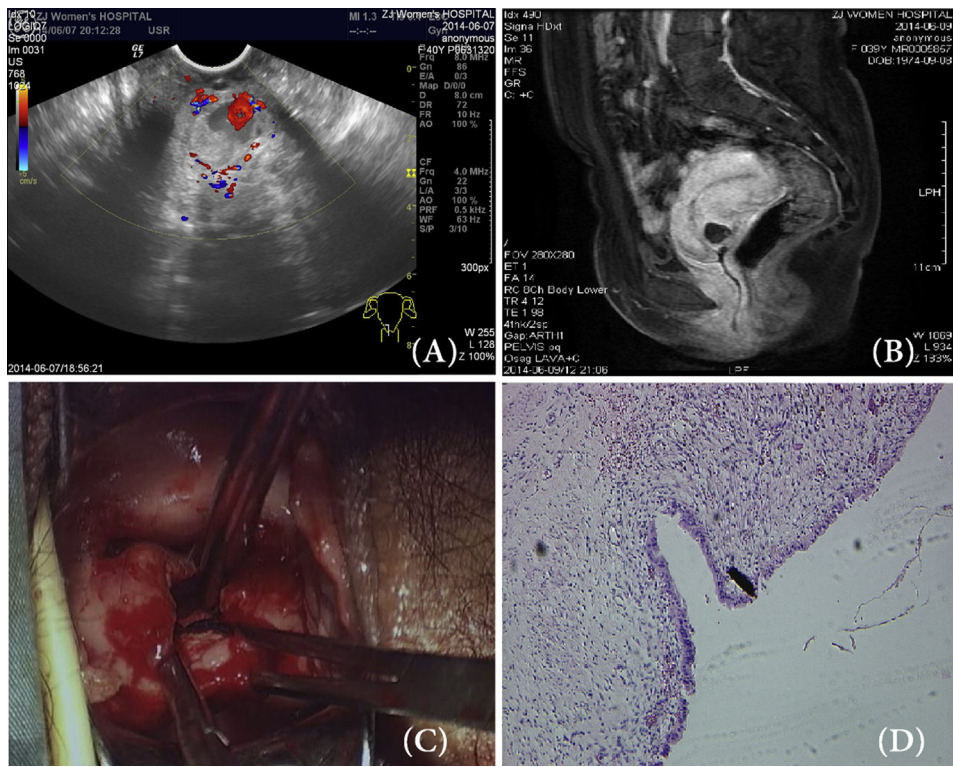


Fig. 1. (A) TVUS scan of the uterine cervix shows a heterogeneous cystic mass rich in peripheral blood flow, without papillary proliferations or internal septa. (B) Enhanced magnetic resonance image showing a cystic mass in posterior lip of the cervix without obvious strengthening signal. (C) Speculum examination showing a laceration with a brown cystic wall in posterior lip of the cervix. (D) Histopathological image (H&E, original magnification $\times 100$).

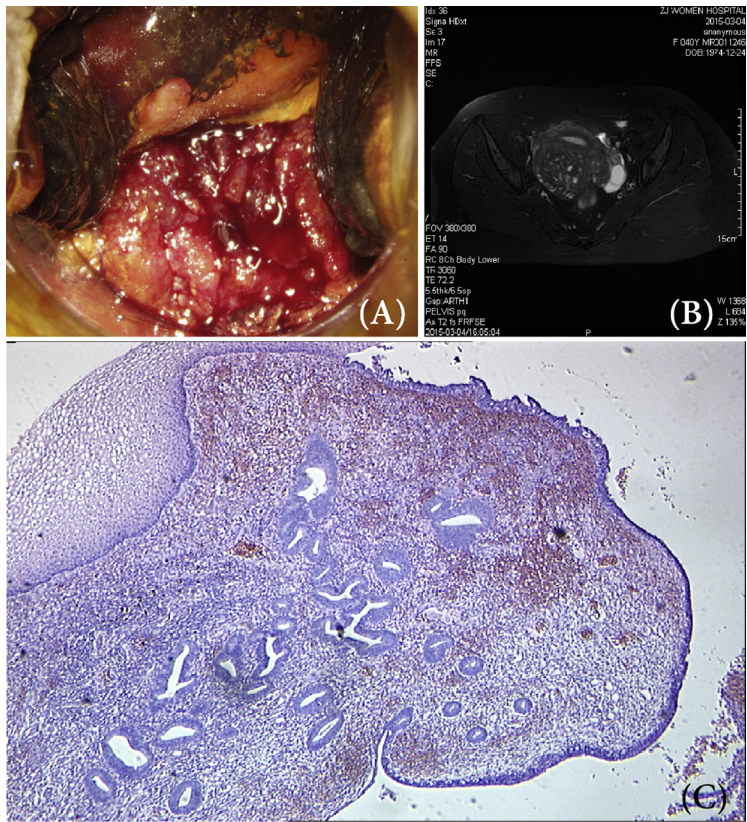


Fig. 2. (A) Colposcope image showing a polypoid mass in posterior lip of the cervix without a boundary with vaginal posterior wall. (B) T2-weighted magnetic resonance image showing a polypoid mass in posterior lip of the cervix. (C) Histopathological image (H&E, original magnification $\times 100$).

Authors' contributions

Yue Wang and Yiyi Zhuge wrote the manuscript and coordinated the clinical analysis of the patients, so they contributed equally to this work. All authors contributed to interpretation of the cases and approved the final manuscript.

Disclosure of interests

The authors declare no conflicts of interest.

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