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Ultrasonography Misdiagnosis of Postmenopausal Endometrial Tuberculosis (PET) Caseous Necrosis: A Case report

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Abstract

Objective: To reduce misdiagnosis and not misdiagnose of postmenopausal endometrial tuberculosis.**Method:** Analyzing a case of postmenopausal endometrial tuberculosis caseous necrosis misdiagnosed as endometrial cancer by ultrasonography.**Result:** This case was clearly diagnosed as postmenopausal endometrial tuberculosis by means of hysteroscopy curettage and pathological examination, thereby the misdiagnosis was rectified.**Conclusion:** Ultrasonography has significant implications for clinical diagnosis of postmenopausal caseous endometrial tuberculosis and identification of endometrial cancer. It is suggested to carry out clinical curettage and pathological examination in time so as to reduce misdiagnosis of postmenopausal endometrial tuberculosis.

Clinical Data

Patients, female, 65 years old, menopause for 8 years, lower abdominal pain for more than 6 months to add up to 20 days, to our hospital for treatment. Patients complains that no history of tuberculosis, and nearly half a year to lose weight 5 kg. By transvaginal ultrasound examination, a heterogeneity echo area of about 5.1 × 4.8 × 7.3 cm (normal mesometrium peripheral is about 0.44 cm thick) could be seen in the middle part of the uterus, and an irregular echo-free area of about 2.5 × 1.3 × 5.6 could be seen in the middle part with poor sound transmission and floating flocculent middle-low echo visible, enveloped by hypoecho. The lining is obscure. CDFI: obvious bleeding signal is unseen (Figures A,B,C and D) and nothing was injected to outline. Bilateral ovaries are obscure; bilateral adnexa areas have no obvious abnormal sign. Heterogeneity echo is hinted in the uterine cavity. Given considerations to the possibility of endometrial cancer combined with endometrial cavity fluid; other possibility could not be excluded, and further examination

is suggested. Then, hysteroscopy curettage was conducted, and the pathological examination result indicated that the substance in the uterus was plenty of caseous necrosis and granuloma lesion, identified as tuberculosis in histomorphology. The patient was transferred to the specialized department and received anti-tuberculosis therapy; two months later, her symptoms relieved.

Discussion

Among tuberculosis in all parts of the body, genital tuberculosis ranks only second to phthisis; and the most frequent part of genital tuberculosis is the fallopian tube (95%-100%), followed by uterus (50%-60%), ovary (20%-30%), cervix (5%-15%) [1]. Endometrial tuberculosis, mostly menstruation infection, reaches the basal layer of the lining via the fallopian tube in non-menstruation, and may cause repeated endometrial infection when flowing with menstrual blood in menstruation [2]. Female genital tuberculosis mostly strikes women aged 20~40 in child-bearing period, and postmenopausal endometrial tuberculosis is rarely seen, therefore, it is easy to be misdiagnosed as endometrial cancer frequently [3]. Barbour and Towers believe that after menopause the uterine lining stops shedding periodically, therefore, curettage of postmenopausal endometrial tuberculosis is applied more widely than child-bearing age. They are mostly caseous lesions, about 60%-70% of the endometrium is invaded [4,5]. Postmenopausal women have low immunity while the dormant bacteria have powerful virulence. The lesion behaves as vaginal fluid mainly by exudation [6]. The abdominal pain is concerned with the mechanical stimulation caused by the plenty of endometrial cavity fluid and cervical adhesion generated by inflammatory stimulation and lesion [7]. The clinical symptoms of endometrial tuberculosis have no specificity, and the ultrasonography manifestation of postmenopausal endometrial tuberculosis is also short of specificity, and its ultrasonoscopy is similar to endometrial cancer, so it is easy to be misdiagnosed as endometrial cancer. The special pathological changes of tuberculosis result in large variation of the ultrasonic image: at early phase, it manifests irregular thickness of endometrium and strong echo, and the lining is serrated against the endometrial cavity fluid. Hereafter,

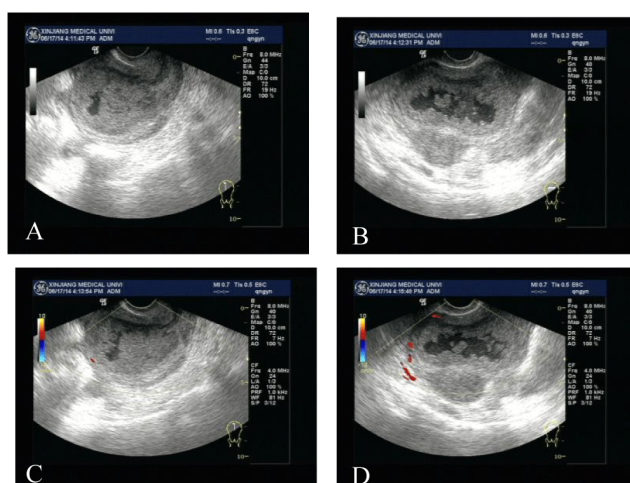
the endometrium necroses, sticks together and becomes calcified; and on the ultrasonoscopy, the uterine cavity has strong limited massive echo or strong echo spots accompanied by acoustic shadow in the rear. On the ultrasonoscopy, irregular thickness of endometrium is visible, no CDFI or a little bleeding signal and endometrial cavity fluid triad [8]. The possibility of endometrial tuberculosis should be given paramount consideration. Ultrasonography is noninvasive and applied widely with high accuracy rate, so it can be used as the first choice for examining endometrial tuberculosis. In this case, the patient's ultrasonoscopy manifests abnormal endometrial echo. Although the patient is menopausal, tuberculosis has a high incidence in developing countries [9]. For fear of misdiagnosis or missed diagnosis, extra vigilance should be attached to tuberculosis. It is important to come up with the possibility of tuberculosis when diagnosing. And checked the patient's history of pulmonary TB as well as her sex partner to investigate the source of infection.

Ultrasonography has significant implications for clinical diagnosis of postmenopausal caseous endometrial tuberculosis and identification of endometrial cancer. It is suggested that clinical curettage is a fatal mistake; because it may spread the infection in the uterus and hematogenous spread of infection may occur.

Maybe fine needle aspiration could be a better way to collect samples for lab. Diagnosis, the anti-tuberculosis therapy should be started before clinical curettage to avoid spreading of infection. Moreover in clinical diagnosis, the doctor shall inquiry the patient about medical history in detail, make comprehensive analysis on medical history, symptoms, signs and each auxiliary examination, fully take the possibility of tuberculosis into consideration and carry out each examination on tuberculosis so as to reduce misdiagnosis rate.

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Figures A-D: Transvaginal ultrasound examination