Case Report

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Uterine Arteriovenous Malformation In Post Menopause: A Case Report

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Introduction

Uterine arteriovenous fistula (UAVF) is a rare. The serious cause of heavy uterine bleeding that can lead to significant morbidity due to abnormal connections between the uterine arterial and venous supply. UAVF was first described by Dubreuil and Lou bat in 1926[1].Uterine arteriovenous malformations are rare, but their incidence is increasing due to both improved diagnosis and the increase in uterine surgery in recent years[2,3]. UAVF can be congenital or acquired, the latter being the most frequent. Congenital ones originate from an alteration in the embryological differentiation of primitive vascular structures, creating abnormal vascular connections (fine capillaries intertwined with myometrial vessels) that can reach large pelvic vessels in addition to the uterine arteries (especially in women of reproductive age) .Acquired arteriovenous malformations constitute true arteriovenous fistulas between the intramural arterial branches and the myometrial venous plexus. They are related to iatrogenic uterine trauma, such as obstetric curettage, uterine surgery (caesarean section, myomectomy), or even traumatic childbirth. Other less frequent causes of AVMs are those coexisting with endometrial cancer, gestational trophoblastic disease, or infections. there is no consensus on the clinical guideline on its treatments, most likely due to its low incidence, unknown etiology, and distinct fertility demands by different patients[4]. Here, we report an elderly patient with uterine arteriovenous malformation. We share this case in order to provide reference for the diagnosis and treatment of uterine arteriovenous fistula in postmenopausal women.

Case Presentation

A 66-year-old woman (gravida 4, para3, abortus 1) presented to our hospital due to progressively worsening abnormal vaginal bleeding over the past four years. She received tubal ligation more than 30 years ago. She denied any other history of pelvic or abdominal surgery. Her laboratory test showed a low hemoglobin level of 90g/L. The patient reported dizziness. Her physical strpapaength and spirit were worse than when she had not experienced abnormal uterine bleeding. Physical examination showed that the conjunctiva of the eyelid was pale, but her heart rate and blood pressure were still in the normal range. Color Doppler ultrasonography showed honeycomb-like diffusely dilated blood vessels within the myometrium. Color Doppler flow imaging (CDFI) examination demonstrated rich internal blood flow signals, which was consistent with arteriovenous fistula. The vessels in the right para-uterine area were expanded to approximately 5.0X4.0 X 3.0 cm. It spread upward to the left iliac fossa. Abdominal computed tomography angiography (CTA) showed bilateral markedly tortuous and dilated uterine arteries that were distributed in both sides of the uterine body, with more prominent vessels in the right side. After ruling out surgical contraindications, we performed a laparoscopic hysterectomy plus bilateral appendectomy. During the surgery, we found that the size of her uterus was enlarged to mimic a 3-month pregnant uterus, with diffuse varicose veins on the surface. An earth-worm like vascular plexus could be seen in the broad and main ligaments and spread to the iliac vascular areas in the bilateral peri uterine regions. These vascular structures were deep into the pelvic floor, particularly on the right side. The veins had significant expansions in the bilateral adnexal areas . There was also a large number of obviously visible dilated communicating vessels branched from the peri-uterine arteries and veins. After the operation, the patient's general condition improved, anemia gradually improved, and there was no obvious vaginal bleeding after the operation. The patient had regular follow-up after the operation. She is in good condition so far.

Discussion

Uterine Arteriovenous malformations is rare. It is an abnormal connection between the uterine arterial branches and the uterine venous plexus.it was first reported by Dubreuil and Lou bat in

1926. There was no actual incidence rate. With the development of diagnostic technologies, the incidence could be gradually increasing. The etiology of UAM can be classified into either congenital or acquired types. The cases of UAM published in recent years. The vast majority of patients diagnosed with uterine or pelvic arteriovenous malformation were women in the reproductive period. Most of patients have recently undergone induced abortion or curettage. Our patient has been menopausal for many years. She have not received pelvic and abdominal surgery for nearly 30 years. The study and analysis of this special case can help us to better understand and summarize the causes of UAM. The exact causes for the formation of UAM in our patient remain unknown. The amount of bleeding may be related to the extent of the arteriovenous fistula. An arteriovenous fistula is commonly thin-walled and is muscle-free, with extremely poor elasticity, its bleeding is difficult to control.

There is no consensus on a clinical guideline to treat UAM. Treatment plans can include expectant management, medication, UAE, or hysterectomy. In clinical practice, we often rely on a patient's symptoms, signs, age, and fertility requirements; and comprehensively evaluate the hemodynamics of the lesion[5,6,7]. Our patient was treated unsatisfactory with UAE. UAE surgery is expensive and may bring great economic burden to patients. UAE therapy may not be the first choice in the treatment of our patient. Hysterectomy may be the first choice in the treatment of our patient.

Conclusion

To summarize, we report a case of UAM with abnormal uterine bleeding after menopause. It was treated by laparoscopic hysterectomy and bilateral appendectomy. Although there is no consensus on the clinical treatment and diagnosis of UAM. The clinicians should rule out the possibility of UAM in women with acute abnormal uterine bleeding. When selecting the treatment strategy, many factors, including age, fertility requirement, and lesion size and extent, should be considered comprehensively should also be considered to select the best treatment option and maximize the therapeutic outcomes and minimize the complications

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Ethical statement: Written consent form was obtained from the patient.

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