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Leiomyoma of the round ligament presenting as an adnexal mass in a patient with a history of hysterectomy

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ABSTRACT

A 52 year old woman complaining of vaginal vault eversion applied to our outpatient clinic. In her medical history, she had underwent total abdominal hysterectomy for uterin leiomyoma 15 years ago. Physical examination revealed a firm, left sided pelvic mass and uterine vault prolapse. Laparotomy and frozen section were performed for the suspected mass. A solid mass arising from the left round ligament was observed. This mass was completely removed and diagnosed as leiomyoma on frozen section. Although adnexal masses are more common causes of pelvic masses in women, leiomyomas should be kept in mind in the differential diagnosis of pelvic masses even in patients with the history of hysterectomy.

1. Introduction

Round ligament of the uterus which is composed of smooth muscle, originates from the uterus, passes through the inguinal canal and ends on the mons pubis [1]. The tumors of the round ligament are rare and leiomyoma of the round ligament after hysterectomy is extremely rare [2–4]. Although the pelvic masses encountered after hysterectomy are usually originate from adnexa, rare causes of pelvic masses, particularly some of which arises from pelvic structures, may be the underlying factor. A two-centimeter diameter leiomyoma of the round ligament after hysterectomy was reported previously [4] and to the best of our knowledge, it is the only reported case of round ligament leiomyoma after hysterectomy in English literature. We present a case with an eight-centimeter diameter leiomyoma of the round ligament in a patient with a history of hysterectomy.

2. Case report

A 52 year old woman who was complaining of vaginal vault eversion applied to our outpatient clinic. She had no further complaints other than vaginal vault eversion. In

her medical history, she had underwent total abdominal hysterectomy for uterin myoma 15 years ago. Pelvic examination revealed a mobile, firm, left sided pelvic mass with third degree vaginal vault prolapse. Ultrasonography and computed tomography demonstrated an eight-centimeter diameter solid mass arising from the left adnexal region with increased vascularity and blood flow velocities obtained by doppler examination (Figure 1). She wasn't aware of the pelvic mass that was diagnosed incidentally. On laboratory, tumor markers were negative. Laparotomy and frozen section were planned. The laparotomy was performed with midline incision for the adnexal mass due to the malignant potential. Peritoneal washings and exploration of the abdominal cavity were performed. During exploration, the uterus was negative seconder to the previous operation, both ovaries and peritoneal surfaces were normal and a solid mass arising from the left round ligament was observed (Figure 2). This mass and both ovaries were completely removed (Figure 3). Frozen section analysis for the mass revealed a leiomyoma. After then the patient underwent abdominal sacrocolpopexy for the treatment of vault prolapse. Postoperative follow-up was uneventful and the patient was discharged on the third day of the operation. Definitive histopathology confirmed the frozen section diagnosis that was reported as a leiomyoma.

3. Discussion

Leiomyomas are the most frequently tumors of female

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Figure 1. Computed tomography scan of the mass.

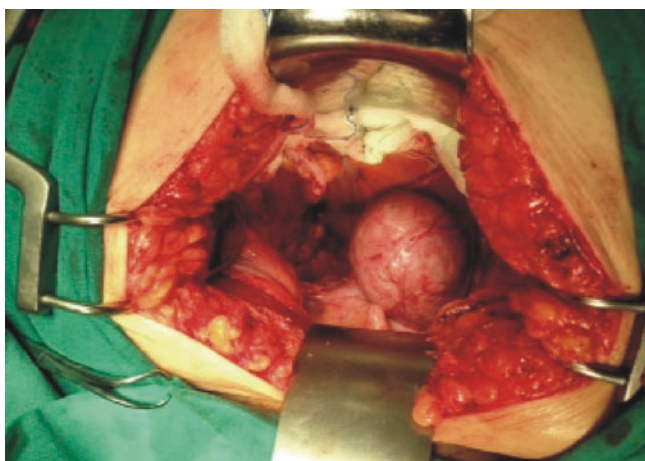


Figure 2. Intraoperative exploration of the pelvic cavity.



Figure 3. Postoperative view of the specimen.

genital tract and are especially seen in the reproductive age. Although they particularly arise from the uterus, they can arise in any tissue containing smooth muscle [5,6]. Round ligament of uterus is composed of smooth muscle. Both estrogen and progesterone receptors which promotes the transformation of smooth muscle to leiomyoma with hormonal activity were found in the structure of round ligament [7]. There are case reports of round ligament leiomyoma [2–4,6,8]. Leiomyoma of the round ligament may originate either in intraperitoneal or in extraperitoneal part of the ligament [8]. In this case, the leiomyoma was extending on the remaining intraperitoneal part of the round ligament after hysterectomy. Preservation of ovaries at the time of hysterectomy improves the quality of life of women [9]. However, clinicians must be aware of tumors

arising from the remaining ovaries and other pelvic structures and follow-up must continue to detect the abnormalities of them. Adnexal masses are the most common causes of pelvic masses in women of this age but sometimes the rare causes such as round ligament leiomyoma that involve the adnexal region can mimic adnexal masses. Imaging modalities particularly magnetic resonance help the preoperative diagnosis of round ligament leiomyomas [10]. Computed tomography examination revealed a left adnexal mass but it was not helpful in the accurate diagnosis of the mass origin. In this case, the preservation of ovaries during hysterectomy in the history of the patient and computed tomography scan directed us to decide that the mass is originating from adnexa. Previously there is a case report of Ghafari *et al.* about a round ligament leiomyoma after hysterectomy. They reported a patient who was complaining about groin and thigh pain after hysterectomy and they observed a two-centimeter diameter round ligament leiomyoma as a cause of pain in diagnostic laparoscopy [4]. However, our patient was complaining about vault prolapse and an eight-centimeter diameter adnexal mass was diagnosed during preoperative evaluation. Also she was not suffering from the symptoms that a pelvic mass may cause. Therefore, the patient was managed for a suspicious adnexal mass and underwent laparotomy. In laparotomy a mass arising from the left round ligament was observed and removed. In the literature, the removal of the leiomyoma was reported to be adequate for the treatment of leiomyoma of the round ligament [2].

In conclusion, although adnexal masses are common causes of pelvic masses in women, leiomyomas should be kept in mind in the differential diagnosis of adnexal masses even in patients with a history of hysterectomy.

Conflict of interest statement

We declare no conflict of interest.

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