Severely calcified leiomyoma of broad ligament in a postmenopausal woman: Report of a rare case

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ABSTRACT

Calcified broad ligament leiomyoma is a rare benign lesion in postmenopausal age group. It causes diagnostic confusion with solid calcified adnexal mass and large bladder calculi at the pelvic region. Clinical and radiological diagnoses were confirmed by histopathology of the hysterectomy specimen. We hereby present a case of heavily calcified broad ligament fibroid in a postmenopausal woman.

Key Words: Broad ligament, calcified leiomyoma, postmenopausal woman

INTRODUCTION

Uterine leiomyomas are the most common benign tumor of the female genital tract in the reproductive age group. Broad ligament leiomyomas are not uncommon. Leiomyomas exhibit different degenerative changes on histopathological examination such as hyaline degeneration, red degeneration, cystic degeneration, fatty degeneration, and calcified degeneration. However, calcified degeneration of leiomyoma in a postmenopausal woman forming bony hard mass is a rare phenomenon. It also leads some diagnostic confusion with ovarian teratoma or large bladder calculus in the radiological investigation. Here, we present a rare case of calcified broad ligament fibroid in a postmenopausal woman treated with hysterectomy without oophorectomy.

CASE REPORT

A 49-year-old postmenopausal woman presented with pain at the lower abdomen for the last 4 months. She had a history of two full-term normal deliveries. Bilateral tubal ligation was done 25 years back. She had no history of irregular menstruation, intake of oral contraceptive, and hormone replacement therapy. Her general examination did not reveal significant abnormality. She was controlled hypertensive and was on oral antihypertensive medication (calcium channel blocker) for the last 2 years. Systemic examination revealed the second-degree uterovaginal prolapse, and pervaginal examination revealed retroverted uterus with a palpable mass at the left fornix. On abdominal ultrasound, there was a solid heterogeneous mass measuring 5 cm × 4 cm attached with the left broad ligament. No other intramural and subserosal fibroids were noted in radiological evaluation. The right-sided tube and ovary were normal. Radiological diagnosis was calcified mass at the left adnexa, suggestive of a bony hard mass.

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of broad ligament fibroid. Vaginal hysterectomy and repair of pelvic floor were planned for her. All biochemical and hematological examinations were within normal limit. She underwent total abdominal hysterectomy and resection of broad ligament tumor without salpingo-oophorectomy and repair of pelvic floor under spinal anesthesia. Postoperative period was uneventful and the specimen was sent to histopathology laboratory.

In gross examination, the uterus measured 8 cm × 4 cm × 3 cm with a hard mass at the left broad ligament. Cervix was elongated 3 cm in length with keratinized ectocervix. The hard mass measured 5 cm × 4 cm × 4 cm with bony hard feeling during cutting with a saw. Cut section was solid whitish with irregular whorled pattern [Figure 1]. The sections from the hard mass were decalcified and processed as standard procedure. The sections revealed fascicles and bundles of smooth muscle cells with extensive calcification.

In light microscopy, the calcification appeared as granular basophilic deposit [Figures 2 and 3]. Endometrium was atrophic and cervix showed chronic nonspecific cervicitis with keratinization. Final histopathological diagnosis was calcified broad ligament fibroid.

DISCUSSION

Leiomyoma is a very common gynecological pathology in childbearing age group. It is a benign tumor of smooth muscle origin and contains varying amount of connective tissue.[1,2] It is thought to be estrogen-dependent tumor and most of the cases regress after menopause.[2,3] Histopathology of leiomyoma reveals intersecting fascicles of spindle cells with cigar-shaped blunt spindle nuclei and eosinophilic cytoplasm. As the leiomyomas enlarge in size, they outgrow blood supply and various degenerative changes occur.[2,3] Hyaline degeneration is the most common type degeneration accounting 63% of all degenerative changes.[2,3] Other degenerations occur less frequently, such as myxomatous degeneration (13%), calcified degeneration (8%), mucoid degeneration (6%), cystic degeneration (4%), red degeneration (3%), and fatty degeneration (3%).[2,4] Calcified degeneration has preponderance in the postmenopausal age group, Black women, and pedunculated subserous fibroid.[2,3] Usually, leiomyomas regress after menopause because of lack of estrogen stimulation. However, it has been suggested that estrone, insulin-like growth factor, and epidermal growth factor stimulate the growth of leiomyoma at postmenopausal age group.[2,3] In obese postmenopausal woman, peripheral conversion of adrenal-derived androstenedione and its conversion to estrone by aromatization stimulate the growth of leiomyoma.[3,4] Impaired vascular supply in a fibroid leads to ischemia and degenerative changes. Calcium deposition occurs at periphery of the leiomyoma.[2,3] However, in our case, the whole leiomyoma was converted into a solid calcified mass.
Leiomyomas are easy to diagnose on ultrasound. However, extensive calcification of leiomyoma causes diagnostic difficulties in ultrasound, especially a calcified pedunculated subserous leiomyoma or a calcified broad ligament leiomyoma.[2] Radiologically, it mimics calcified pedunculated subserous fibroid, ovarian teratoma, calcified fibrous tumor of the ovary, large bladder calculi, and rarely calcified parasite (coiled guinea worm) giving an appearance of parasitic leiomyoma.[2,4] Symptomatically, leiomyomas present with irregular heavy menstruation and pain at the lower abdomen and pelvic region. In our case, broad ligament fibroid presented with pain at the lower abdomen. Hysterectomy with or without salpingo-oophorectomy is the treatment of choice in broad ligament fibroid in a postmenopausal woman.

In conclusion, calcified broad ligament fibroid is a rare benign tumor. Sometimes, it may lead to diagnostic difficulty with other calcified masses such as teratoma or bladder calculi. Hysterectomy is the definitive management, and postoperative histopathology examination of the tumor can give a correct diagnosis.

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Conflicts of interest
There are no conflicts of interest.

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