CASE REPORT

LEIOMYOMA OF THE VAGINA

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A vaginal leiomyoma is normally a benign smooth muscle tumour in the vagina. These tumours are extremely rare and the aetiology is unknown. The imaging findings are those of a nonspecific well-defined enhancing soft tissue mass centred on the vagina. The lesion may be very large, but is usually under 6 cm in size. Patients are asymptomatic in the early stages. Symptoms arise with the growth of tumour mainly due to compression. Most leiomyomas are not diagnosed clinically but only on histological examination. A case of primary leiomyoma of vagina is presented here.

INTRODUCTION

The vaginal mucosa is a nonkeratinized, stratified squamous epithelium. Vaginal submucosa lies under the basement membrane. The submucosa is composed of connective tissue with elastic fibres and numerous lymphatics and venous plexus. The submucosa is surrounded by a muscularis (i.e., the tunica muscularis vaginae) composed of a circular layer of muscle overlaid by a longitudinal layer. A layer of loose connective tissue covers the muscularis in turn. The solid tumours arising from the vaginal tissue include papilloma, haemangioma, mucous polyp and rarely leiomyoma[1].

Myomas are the most frequent gynaecological tumours that are seen in about 20% of women after 35 years of age[2]. Most of the myomas arise in uterus, however the extrauterine sites include fallopian tubes, cervix, vagina, round ligament, ovary uterosacral ligament, and urethra[2,3]. A firm single, globular or polypoidal mass appearing in the vagina is usually a leioluomatous polyp arising from the cervix or from the cavity of uterus. Leiomyoma developing *de novo* from fibromuscular elements of vagina is a rare entity[1]. When such a tumour arises from upper part of vagina it is mistaken for a cervical fibroid.

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CASE REPORT

An 18 year old unmarried girl presented with mass coming out of vagina for 3 months and with some vaginal discharge off and on. Menstrual cycle was 6 days every month with moderate flow. Single digit examination was suggestive of endocervical polyp. Laboratory investigations were non-significant except for a few pus cells in urine. Uterus and ovaries were normal on ultrasonography.

Examination under anaesthesia showed an anterior wall cystic mass 6–7 Cm in diameter, which had a well-defined capsule. The tumour was enucleated and the core contained some necrotic material. After enucleation the space was gently curetted. Histopathology and immunocytochemistry confirmed diagnosis of aggressive leiomyoma with 5–10 mitosis per high power field. Opinion of oncologist was taken for follow up of the case.

An Enhanced CT scan of pelvis revealed a round hypodense shadow in right adnexal region that gave an impression of right ovarian cyst about 2.5 Cm in diameter without any radiologic evidence of malignancy. It was planned to be managed conservatively. Follow up over next one year (last check up being in Feb 2003) has not revealed any recurrence of leiomyoma/malignancy, whereas ovarian cyst has resolved.

DISCUSSION

Leiomyoma of vagina is a rare condition. Whenever such a tumour is detected, it has to be removed immediately to prevent further growth and sarcomatous change in future[4]. The majority of leiomyomas arise from body of the uterus and sometimes from cervix. The extrauterine sites of this tumour are round ligament, uterosacral ligament, ovary, inguinal canal and very rarely vagina and vulva. Primary vaginal fibroids are very rarely encountered. Approximately 300 cases have been reported in world literature[1]. Bennet and Erlich found only 9 cases in 50,000 surgical specimens and 15,000 autopsies reviewed at Johns Hopkins Hospital[5].

The tumours were most commonly situated on anterior wall of vagina and varied from 1 to 3 Cm in diameter[2]. Most of the cases are diagnosed clinically as lesions other than leiomyomas, and correct diagnosis is made only after histological examination[2].

In the vagina, leiomyoma usually presents as a solid single nodule mostly from anterior vaginal wall in women between 35–50 years of age[1]. Shaw reported a case of paraurethral leiomyoma that became clinically apparent in postpartum period[5].

Ultrasonography usually diagnoses it to be a cervical fibroid. Magnetic imaging shows it as a homogenous lesion with signal similar to that of myometrium[6]. These rare lesions are benign, and symptoms, often absent during early stages, are due to compression from the growing tumor[7], depending on size and location of leiomyoma[4]. A recent study of the histologic source, clinical features and treatment methods of 25 cases of leiomyoma of vagina revealed that leiomyomas of vagina were slow in growth and solitary in number[4].

Presentation can be as urinary symptoms like dysuria frequency, and urinary retention along with dyspareunia and pelvic pain[6]. Low back pain occurs due to pressure on the pelvic ligaments or lumbar plexus and dysuria due to pressure on the urinary bladder. Superiorly situated leiomyomas may involve the distal ureters, which can be assessed by intravenous urography. Large lesions may interfere with delivery.

Pathologically they are firm, well circumscribed homogenous and resemble to their uterine counterpart. Though the lesion is usually regarded as benign, sarcomatous changes have been reported[8]. Macroscopically the tumour on cut section is white to tan with a whorled appearance. As myomas exhibit growth, they also risk diminution of blood supply, giving rise to a series of degenerative changes, which alter their gross and microscopic appearances. Upon microscopy these tumours consist of fascicles of uniform smooth muscle cells having a typical spindle configuration with indistinct cell borders and abundant pale eosinophilic cytoplasm. Cystic degeneration visualized as watery fluid in the interstitium is frequently seen in larger tumors[2].

Treatment is always surgical, the only problem being the most effective approach. This is either by upper or lower route, depending on location of the tumor[7]. The practical approach to such a vaginal mass entails immediate careful excision[9].

Horn *et al* also reported that these tumours were enucleated with an unconspicious postoperative follow up, however, they, too, suggested early enucleation because of the possibility of undergoing malignant change[10]. Excision and enucleation is the treatment of choice[1,6]. Vaginal approach may cause severe haemorrhage if the base of tumour is not approachable or it is present in upper part of vaginal fornices. It is advisable to choose abdominal route for such cases. At times an abdominoperineal approach is needed to perform complete surgery.

Local recurrences have been reported. The tumour is oestrogen-dependent and regresses after menopause. These are rare tumours with recurrence being uncommon. A rare case of huge vaginal leiomyoma recurrence was reported by Dhaliwal *et al* who suggested that if recurrence occurs with intact ovarian function ovariectomy should also be done[11].

Nel and Tiltman found no recurrence in a follow-up period that varied from 8 months to 20 years[2]. There is a very old case report of recurrence of this tumour during pregnancy with a suggestion of hormone dependency[12]. There is a single study that has reported chances of recurrence and sarcomatous change[4].

Sarcomas represent 2–3% of all gynecologic malignancies however only 10% occur outside uterus. There are case reports of leiomyosarcoma of vagina. They are common in posterior wall of vagina[10]. There has also been a solitary case report of bizarre leiomyoma of vagina in a 44-year-old woman[13].

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