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Case Report

A rare case of cystic degeneration of fibroid uterus with clinical dilemma

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ABSTRACT

Uterine fibroids are most common benign uterine neoplasm occurring in 20-30% of reproductive age. Generally, the sonographic appearance of leiomyomas is characteristic; however, they can undergo various kind of degenerations that can dramatically change their sonographic appearance and make the diagnosis quite challenging. We hereby describe a case report of 31-year-old women who presented with menorrhagia and dysmenorrhoea and her imaging with an ultrasound revealed an uterine myoma that undergone cystic changes, mimicking myometrial cyst, adenomyosis, hematometra. Laparoscopic myomectomy was done and histopathological examination revealed cystic degeneration of fibroid.

Keywords: Uterine fibroids, Cystic degeneration, Laparoscopic myomectomy

INTRODUCTION

Leiomyomas are the commonest uterine neoplasm, occurring in around 20-30% of women in the reproductive age group.[1-3] They are composed of smooth muscle and fibrous tissue and are benign in nature.[1] The typical appearances of leiomyomas are easily recognized on imaging. However, the atypical appearances that follow degenerative changes may cause confusion in diagnosis.[4] Appropriate clinical and sonographic examination followed by surgical management and good peri-operative care are necessary to obtain a good result after removal.

CASE REPORT

A 31-year-old woman, presented with chief complaints of heavy menstrual bleeding for 3 months associated with dysmenorrhoea. She was apparently normal prior 3months, when she started with heavy bleeding during menses associated with passing clots and dysmenorrhoea. Her previous menstrual cycles were regular. She was P2L2, last child birth 4 years, not tubectomised. No significant medical and family history. On examination she was average built with mild pallor. Systemic examination was normal. On per abdomen examination, uterus was found to be enlarged up to 14 weeks of gestation. Per speculum examination revealed healthy cervix and vagina. On bimanual examination, cervix was deviated towards left fornix, right forniceal fullness present, uterus enlarged to 14 weeks size., mobile. No tenderness in pod. Trans vaginal sonography shown bulky uterus with thick and irregular endometrium. A large cystic lesion around 8x7 cm noted inside endometrial cavity with low level echoes and without internal septations. Myometrium is stretched and thinned out surrounding the cystic mass. Both adnexae normal. Suggestive of large intrauterine cystic adenomyosis, cystic degeneration of fibroid, hematometra (Figure 1).

Intraoperative findings

The laparoscopic approach was decided to ensure the diagnosis and grant surgical treatment. The intra-

operative inspection of pelvic area showed bulky uterus with 8x7 cm mass in anterior myometrium, which was soft and cystic to touch (Figure 2). Intra-operative differential diagnosis of myometrial cyst and cystic degeneration of fibroid was made. Injection vasopressin 10 units in 100 ml NS instilled in myometrium to minimize bleeding. A straw-coloured fluid aspirated from cystic lesion (Figure 3). Myomectomy proceeded by carefully dissecting the cyst wall from myometrium and sent for HPE (Figure 4-5). Endometrial cavity was not breached. Uterine wall is sutured in 2 layers using V-LOC sutures. Post operative period uneventful and she was discharged the next day. HPE report revealed cystic degeneration of fibroid (Figure 6).

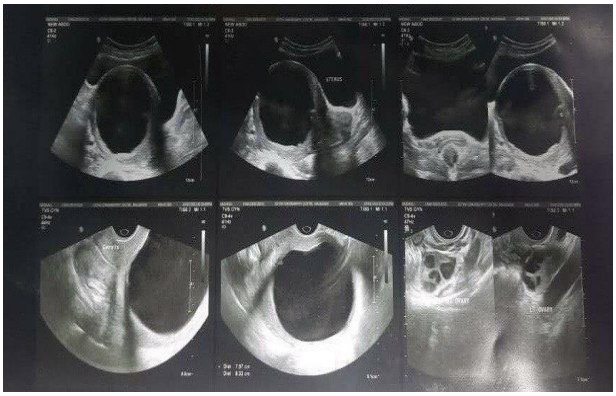

Figure 1: Ultrasound of uterine myoma with cystic changes.

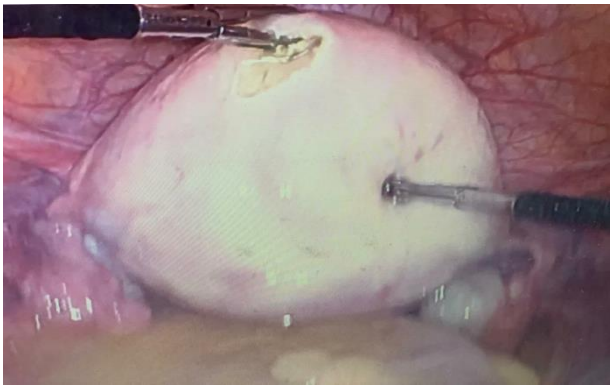

Figure 2: Intraoperative findings of fibroid with soft and cystic consistency.

DISCUSSION

Arising from the smooth muscle cells of the uterus, fibroids may be single or multiple. Many times, they cause menorrhagia or metrorrhagia. The size of fibroid varies from microscopic to giant. Big fibroids, due to their size, they can compress any nearby organs leading to pressure symptoms of bowel, bladder and fertility issues, especially when it distorts the endometrial cavity. As fibroids enlarge, they outgrow their blood supply which evokes a cascade of inflammatory reactions and ischaemic changes leading to various degenerations such as Hyaline degeneration (60%), cystic (4%), myxoid (1-3%), calcified (4%), sarcomatous degeneration (0.1-0.8%).[5] Typical appearances of leiomyomas are easily recognised by imaging as well defined, hypoechoic solid mass with circumferential vascularity on doppler.

Figure 3: Aspirated straw colored fluid.

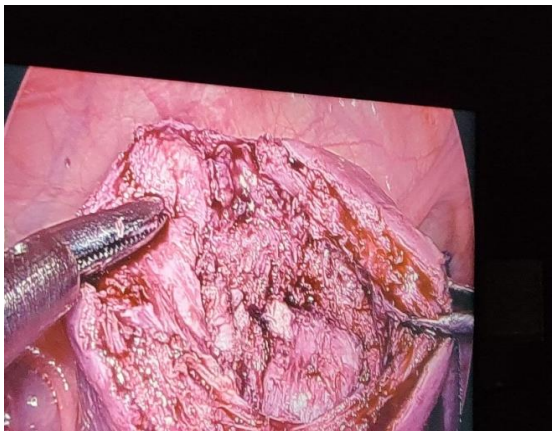

Figure 4: Myoma bed.

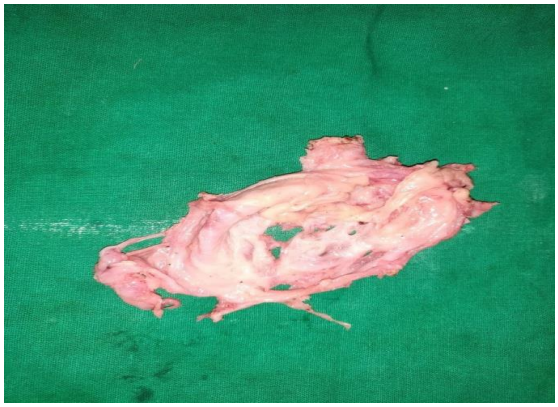

Figure 5: Dissected cyst wall.

However, atypical appearances following degenerative changes can cause confusion in diagnosis. Degenerated

fibroids may have complex appearance, with areas of cystic change. Cystic degeneration in submucous fibroid appear as hypoechoic or anechoic areas with in a fibroid. and may be even more misleading.[6]

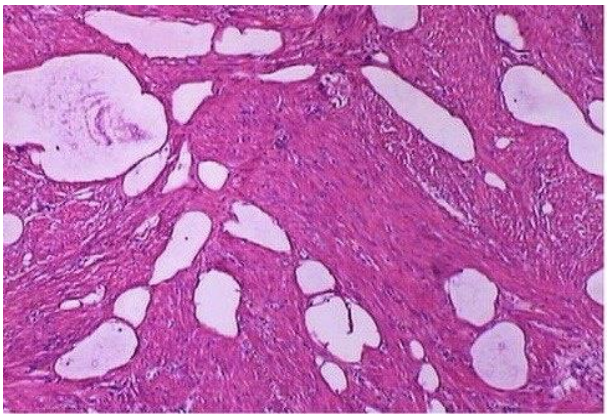

Figure 6: Cystic degeneration of fibroid.

Calcified fibroids will show a degree of posterior acoustic shadowing. Degenerated leiomyomas are misdiagnosed as adenomyosis, hematometra, myometrial cyst, gestational sac, uterine sarcoma and ovarian masses.[7] The preferred initial imaging modality is ultrasonography since it is least invasive and cost-effective. The echogenicity of leiomyomas depends on the ratio of fibrous tissue to smooth muscle, extent of degeneration and presence of dystrophic calcification. A CT or MRI scan can be really useful in doubtful origin of pelvic mass on USG but has serious limitations such as non-availability and high cost.[8] The treatment approach should be individualised depending upon factors such as age, severity of symptoms, desire for fertility, suspicious of malignancy, and proximity to menopause. A surgical approach is most frequently preferred for management of large fibroids.

CONCLUSION

Cystic degeneration of fibroid should be kept as differential diagnosis prior to surgical intervention in pelvic masses. CT and MRI scan can be useful in such cases. As cystic degeneration of fibroid is a rare entity, observed only in 4% leiomyomas, this frequently results in unusual clinical presentation and diagnostic dilemmas. Sometimes the confusion is so much that the clear picture is revealed during laparoscopy.

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