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LEIOMYOMA WITH EXTENSIVE CHONDROID METAPLASIA

Pathology

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KEYWORDS

INTRODUCTION

Leiomyoma is a benign smooth muscle neoplasm which can occur in any organ,but mostly they are seen in uterus, small bowel and oesophagus. It is the most common uterine neoplasm[1]. The typical histological pattern of leiomyoma shows intersecting fascicles of monotonous cells with indistinct borders, eosinophilic cytoplasm, cigar shaped nuclei and small to inconspicuous nucleoli[2]. They can outgrow their blood supply leading to various secondary changes such as hyaline or myxoid degeneration, edema, calcification, cystic degeneration and red degeneration. However, metaplasia is rarely seen[3]. Hence, we report a case of uterine leiomyoma with extensive chondroid metaplasia.

Case Presentation

A 49 years old female, reported to our hospital gynecology out-patient department with complaints of menorrhagia and abdominal pain.She had three live births and had undergoneplanned parenthood following her last child birth. Her hemoglobin level was 7.9gm/dl. Dilatation and curettage of endometrial cavity was done which was uneventful. On histopathological examination of the endometrial biopsy, there was endometrial hyperplasia with atypia. On transvaginal ultrasonography, there was uterine fibroid. So,the patient underwent total abdominal hysterectomy following which the specimen was subjected to histopathological evaluation.

On gross examination, uterine corpus was enlarged measuring 8x7.5x6cm. There was a single well circumscribed intramural fibroid measuring 7 cm in diameter, the cut surface of which wasfirm and whitish with a whorled appearance. There were no visible areas of hemorrhage, necrosis or cystic spaces (Figure1).

Histopathological examinationof this whorled intramural lesion revealed large islands of chondroid metaplastic foci interspersed in between intersecting fascicles of smooth muscle bundles (Figure1)..Extensive sectioning of the lesion was carried out to rule out a sarcomatous cartilaginous change in view of extensive metaplastic changes. No atypical cells or increased mitotic activity was noted. Keeping in view clinical and histopathological findings, the diagnosis of uterine leiomyoma with extensive chondroid metaplasia was made.

DISCUSSION

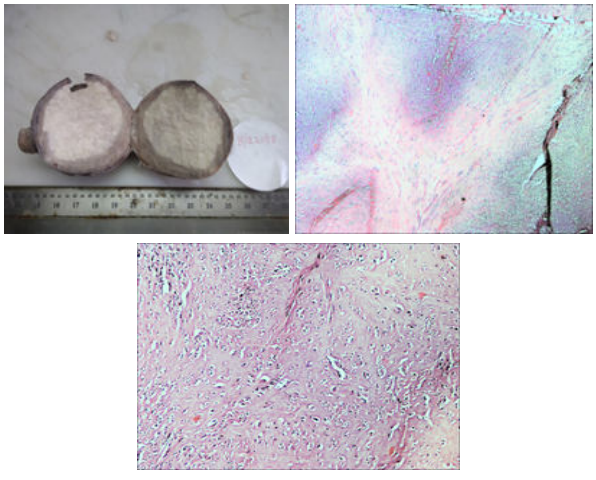
Uterine leiomyoma usually occurs in females of reproductive age group and is dependent on estrogen for their growth as they contain estrogen and progesterone receptors[4].They aremonoclonal, and approximately 40% have chromosomalabnormalities, including translocation between chromosomes 12 and 14, deletions of chromosome7, and the trisomy of chromosome12[2].

Clinical presentation usually depends on their location and size. Approximately 50% of the patients are asymptomatic; others can present with pain, abnormal uterine bleeding, infertility, increased urination, increased menstrual pain and irregularities[4].

Macroscopically, leiomyoma commonly presents as multiple, intramural spherical masses with white to tan whorled trabecular cut surface. This gross appearance can be altered by degenerative changes, such as hemorrhage which appears as dark red areas and necrosis appearing as sharply demarcated yellow areas[5].

Microscopically, typical leiomyomas are composed of whorled anastomosing fascicles of uniform smooth cells. Mitotic figures are seen infrequently. Various degenerative and secondary changes can be seenin leiomyoma most commonly as hyaline degeneration, cystic degeneration, calcification and fatty degeneration and rarely as septic degeneration and red degeneration (especially in pregnancy). However, metaplasia is extremely uncommon in a uterine leiomyoma[6]. The exact cause of chondroid metaplasia is not known but it is postulated that it can be the result of a reprogramming of stem cells that are known to exist in normal tissue or of undifferentiated mesenchymal cells present in connective tissue[7]. These metaplastic changes do not have any malignant potential, but their presence may lead to consideration and ruling out possible diagnosis of other mesenchymal tumors which show heterologous mesenchymal elements.

Figure 1 (Clockwise from top left) – Gross appearance of uterine intramural fibroid; On histopathological examination, large islands of chondroid metaplastic foci interspersed in between intersecting fascicles of smooth muscle bundles.



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