Myxoid degeneration in a huge uterine leiomyoma: an unusual benign pathology mimicking malignancy

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Abstract
Uterine leiomyoma are the most common benign uterine tumor. Leiomyoma is a firm and rubbery solid tumor. Infrequently, cystic or myxoid degeneration occurred in the tumor. Giant leiomyoma commonly arise from the uterus which are susceptible to this type of degeneration. We report a case of large leiomyoma arising from the posterior wall of the uterus with myxoid degeneration in a 40-year-old woman complained of pelvic heaviness with a palpable pelviabdominal mass. The patient has had hysterectomy with salpingo-oophorectomy. The mass weighted about five kgs. Final histological findings concluded to a uterine myxoid leiomyoma. In conclusion, myxoid leiomyoma of the uterus is rare, its diagnosis remains histological. Leiomyosarcoma should always be ruled out. Although it should be differentiated from malignant ovarian tumor preoperative.

Key words: leiomyoma, myxoid, uterus, hysterectomy

Introduction
Myxoid degeneration of the leiomyoma is a benign smooth muscle tumor of the uterus with extensive myxoid changes. It is characterized by absence of mitotic activity. We report a case of uterine myxoid leiomyoma in a 40-year-old woman. Through this case, we want to highlight clinical and histological aspects of this rare pathology.

Case report
A 40-year-old woman, G3P3, NVD, was referred to our hospital complained of abdominal fullness, heaviness, distension and a palpable pelviabdominal mass. Distension is slowly over months and progressive. There is no change in her menstrual cycle or bowel habits. No past history of neoplasm or hormonal therapy. No history of weight loss.

Examination revealed a vitally stable patient, conscious, with large, firm, regular and mobile abdominal-pelvic mass extending to the sub-umbilical region with the lower pole could not be reached. Vaginal examination revealed the mass to be inseparable of the uterus. Rectal examination was normal. All other systems were normal Laboratory tests were normal including CA 125. Ultrasonography showed a large uterus with heterogeneous mass with solid and cystic components in the abdominal cavity. The mass is arising from the back of the uterus. CT imaging was performed, which showed a large solido-cystic heterogenous, abdomino-pelvic mass, arising from the uterus.

Diagnosis of an atypical uterine leiomyoma was suspected. The patient underwent exploratory laparotomy that revealed a large solido-cystic mass (Fig. 1) about 40 cm in diameter and was originating from the posterior wall of the uterus and in close contact with sigmoid, rectum and bladder without any intra-mural invasion. Patient has had total abdominal hysterectomy with bilateral salpingo-oophorectomy and excision of the tumor that was sent for histopathological assessment.

Gross examination showed a solido-cystic tumor that weighted four kg. The tumor was a solid-cystic on cut section. The solid areas were whitish and fibrous. The cystic areas were myxoid. Microscopic examination showed a proliferation of smooth muscle cells without atypia or mitotic activity. The intervening stroma was myxoid and edematous. No vascular invasion or necrosis was observed. Final report revealed a diagnosis of myxoid uterine leiomyoma without any malignant proliferation. Follow-up was uneventful.

Discussion
Leiomyoma are generally firm and rubbery solid tumors. They can undergo different types of degeneration which is atypical. Including hyaline, myxoid and cystic degeneration, dystrophic calcification and red degeneration [1].

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Fig. 1. Huge leiomyoma with myxoid degeneration (cystic spaces) on cut section

Hyalinization is the most common type, occurring in up to 60% of cases [2]. Myxoid leiomyomas are histologically a subtype composed mainly of smooth muscle cells, with significant accumulation of a cellular material rich in acid mucins [3].

Clinical diagnosis of myxoid leiomyoma is difficult. This form of leiomyoma is often asymptomatic, and is usually discovered by huge abdominal mass and pelvic pain. Our patient had no complaint other than pelvic heaviness. Radiological investigations are of great help in the diagnosis. In ultrasonography, degenerative leiomyoma is commonly hypechochogenous and excessive degeneration may be recognized as a cystic pattern [4]. In our case, ultrasonography showed the presence of a large mass with solid and cystic components adjacent to the uterus. Computed-tomography and magnetic resonance imaging (MRI) can help preoperatively [4-6]. Myxoid leiomyoma contains a significant myxoid material between the smooth muscle cells. This myxoid component is heterogenous, high intensity on MRI T2 weighted images. On T1 weighted images, it seems in low intensity, with peripheral contrast enhancement accorded to the multivesicular character [5, 6]. In our case, CT led to suspicious of the diagnosis and the patient had a hysterectomy with mass excision. The definitive diagnosis of this form of leiomyoma is only by histopathologic examination. Which can determine the myxoid nature of the tumor and eliminate malignancy, especially the myxoid leiomyosarcoma of the uterus. Myxoid changes occur in benign smooth muscle tumors but this must be distinguished from myxoid leiomyosarcoma [7]. Which shows infiltrative growth, extensive myxoid change and nuclear enlargement and pleomorphism. The myxoid stroma in leiomyoma arises from the myxoid degeneration of collagen. This transformation leaves large, thick-walled vessels, a feature not found in myxoid leiomyosarcoma. When the border between a myxoid tumor and adjacent myometrium becomes infiltrated and the cells are atypical, the lesion in question is malignant [8]. The lack of cellular and nuclear atypia and the mitotic figures in less than two fields out of 10 fields in microscopy are very similar findings in both tumors [9]. In addition, several studies have shown that uterine leiomyosarcoma have significantly higher Ki67 index and p53 expression levels than benign smooth muscle tumors [10].

Conclusion

Myxoid degeneration of the leiomyoma of the uterus is a rare benign tumor, it mimicks ovarian malignancy preoperative and leiomyosarcoma intraoperative on cut-section. Its diagnosis remains histological. Leiomyosarcoma should always be ruled out.

References


