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Case Report

Rare uterine adenomatoid tumor: A Case Report

Uterus adenomatoid tumor

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Abstract

Introduction: Uterine Adenomatoid Tumors (AT) are benign formations of the uterine serosa. They originate from the mesothelium and form 'gland-like' structures. Clinically, it has no differences from a myoma. We aimed to present our case, which was operated on due to a myoma uteri, and the final result was an adenomatoid tumor.

Case Presentation: The patient, 38 years and solid mass originating from the right uterine segment was observed in the pelvic examination and ultrasonographic imaging of the patient. The pathology result of the patient who underwent Myomectomy with Pfannenstiel incision and staining with D2-40 and HBME-1 suggests mesothelial neoplasia, such as mesothelial neoplasms are tumors that arise from the mesothelial cells lining the serous surfaces.

Conclusion: In light of current information, it is essential to follow them as benign tumors to prevent overtreatment. Additionally, they should not be considered for preliminary diagnosis during the preoperative process.

Keywords

uterus, adenomatoid tumor, cyst, oncology

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Introduction

Adenomatoid tumors (AT) were described nearly a century ago, and their nature has been a subject of debate for decades. Although it is quite rare in the literature, with an incidence of < 1%–5% in hysterectomy specimens, it has been reported to be approximately 1%–1.6% in several large series; it has also been reported that AT are mostly asymptomatic and can be found with accompanying leiomyomas.[1]

They are usually tumors of mesothelial origin involving the uterus, fallopian tubes, and paratesticular region. Adenomatoid tumors of the adrenal gland, liver, extragenital peritoneum, pleura, and mediastinum have been rarely reported. They are usually small incidental findings, but large, multicystic, and papillary tumors, as well as multiple tumors, have been described. Their pathogenesis is associated with immunosuppression and mutations in TRAF7.[2] Pathological examination is critical.[3] Uterine AT occur in the outer myometrium and may mimic leiomyomas. Since hormonal therapy cannot be applied to AT and laparoscopic enucleation is not as easy as myomectomy, it is essential to distinguish AT from leiomyomas for adequate treatment.[4] This study aims to present a case that was operated on for a myoma at the Department of Obstetrics and Gynecology, Selçuk University, and whose final pathology result was reported as a uterine AT.

Case Presentation

The patient was a female, 38 years old, Turkish, and applied to our clinic due to abnormal uterine bleeding and abdominal pain. The patient, who is multiparous and also has asthma, has no previous surgery. A solid mass originating from the right uterine segment was observed in the pelvic examination and ultrasonographic imaging of the patient. Endometrial biopsy resulted in proliferative endometrium. In contrast-enhanced MR imaging, limited diffusion in the solid component structure was noted, and the patient was operated on due to the possibility of malignancy. The pathology result of the patient who underwent Myomectomy with Pfannenstiel incision and staining with D2-40 and HBME-1 suggests mesothelial neoplasia. There is no mitotic activity, but the solidified parts may indicate atypia. The presence of lymphoid infiltration patterns different from those of clear cells was evaluated as indicative of an AT. The patient underwent routine follow-up, and chemoradiotherapy was not considered.

Ethics Approval

Ethical committee approval was not required for this single case report. Written informed consent was obtained from the patient for publication of this case report and accompanying anonymized images.

Reporting Guidelines

This case is reported in accordance with the CARE guidelines.

Discussion

A rarity that should not be overlooked may be related to the fact that these lesions exhibit macroscopic features similar to myomas, which may have led to cases being undetected due to insufficient sampling. Therefore, it is thought that the number of reported cases may be lower than the actual number.

It is a common epithelial tumor encountered in both female and male urogenital systems.[5] Patient complaints, imaging, endometrial and cervical samplings, and pelvic examination are not specific for uterine AT. However, the high level of tumor markers may be indicative of malignancy. The type and time of surgery depend on the surgeon's choice. In a case report shown in the literature, a 3.3*2.7 cm corpus posterior myoma was diagnosed by laparoscopic surgery and was later reported as an AT in the pathology evaluation. In the study, while the imaging was interpreted as favoring a myoma, another study revealed homogeneous low signal intensity in T1-weighted images and high signal intensity in T2-weighted images. A thin hypointense rim was seen around the lesion in T2-weighted images. In T1-weighted images enhanced with gadopentetate dimeglumine, the septa were well enhanced, similar to the adjacent normal myometrium. No enhanced solid part was seen. The primary limitation of this study is its limited sample size. A survey published in the literature evaluated 102 patients, noting that this diagnosis is relatively common according to recent literature with immunohistochemical staining will enhance histopathological diagnoses. It may be a parasitic, intraligamentary, or atypically located myoma or a simultaneous dermoid cyst or ovarian fibroma.[6] Magnetic resonance imaging may also be helpful in diagnosis. It may also indicate peripheral ring-like high density on T2WI and DWI. Dynamic contrast-enhanced MRI may help distinguish it from leiomyoma. Although they are benign lesions, it is an interesting feature that they can be found in lymph nodes.

In a study examining the incidental diagnosis rates in examinations performed after prophylactic surgery for BRCA mutations, immunohistochemical staining revealed positive expression for calretinin, WT1, and cytokeratin 7, and negative expression for PAX8 and CD34, thereby confirming the diagnosis of AT and excluding tubal malignancy. ATs tend to mimic malignancy and trigger excessive resection. Such clinical conditions have been described in several studies for the ovaries, uterus, and fallopian tubes, emphasizing the importance of differential diagnosis to avoid unnecessary treatment.[7]

It has also been shown in the literature that routine myomectomy and hysterectomy can be planned as a procedure in the absence of warning symptoms.

Evaluation of subtypes is essential for final pathology; uterine AT, especially marked ring cell adenomatosis, are complex tumors to diagnose. Additionally, multicystic nodular lesions have been described in the omentum, the serosa of the small bowel, and the peritoneum.[8] In conclusion, AT are rare and require attention. Uterine AT, although benign, may mimic leiomyomas clinically and radiologically. Accurate preoperative assessment is essential to avoid unnecessary aggressive treatment. Pathological confirmation remains the gold standard for diagnosis.

Limitations

Because this study is based on a single case, generalizations cannot be made. Imaging and pathological evaluations were performed at a single center, which may introduce observer bias. Due to

the limited number of cases in the literature, it is difficult to establish standardized diagnostic and therapeutic approaches.

Conclusion

In uterine cystic structures, differential diagnoses such as adenomyosis, degenerated myoma, anatomical confusion with adnexal cysts, isthmocele, suture reaction, and endometrial nodules should be considered. Importance should be given to pathologıcal examination of myomas showing atypical formation during surgery.

Ethics Declarations
Ethical committee approval was not required for this single case report. Written informed consent was obtained from the patient for publication of this case report and accompanying anonymized images.

Animal and Human Rights Statement
Human studies were carried out by the authors for this article.

Informed Consent
Written informed consent was obtained from the patient for publication of this case report. The patient's identity has been protected.

Conflict of interest
The authors declare that there is no conflict of interest.

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Scientific Responsibility Statement
The authors declare that they are responsible for the article's scientific content, including study design, data collection, analysis and interpretation, writing, and some of the main line, or all of the preparation and scientific review of the contents, and approval of the final version of the article.

Abbreviations
AT: Adenomatoid Tumor
BRCA: Breast Cancer Gene
D2-40: Podoplanin (immunohistochemical marker)
DWI: Diffusion-Weighted Imaging
HBME-1: Human Bone Marrow Endothelial Marker-1
MR: Magnetic Resonance
MRI: Magnetic Resonance Imaging
T1WI: T1-Weighted Imaging
T2WI: T2-Weighted Imaging

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