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Case Report

A case report on leiomyoma associated with uterine anomaly

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ABSTRACT

Uterine leiomyomas are common benign smooth-muscle tumors of the uterus, whereas uterine didelphys is an uncommon Müllerian duct anomaly characterized by duplication of the uterine cavities and cervices. The coexistence of a large symptomatic leiomyoma with uterine didelphys may create diagnostic and surgical challenges because the abnormal anatomy can be difficult to recognize on routine clinical examination and ultrasonography. We report a 43-year-old multiparous woman who presented with heavy menstrual bleeding and lower abdominal pain for 9 months. On examination, the uterus was approximately 24 weeks in size and a vaginal septum was noted. Ultrasonography demonstrated a bulky uterus with multiple heterogeneous lesions suggestive of multiple fibroids. Her hemoglobin was 7.4 g/dl and she received three units of packed red blood cells preoperatively. A hysterectomy was planned because of the large symptomatic fibroid burden and completed family. Intraoperatively, a 15×15 cm leiomyoma with two additional approximately 6×6 cm leiomyomas was identified. Two separate uteri with attached cornual structures and two cervices were unexpectedly recognized during surgery. The uteri and multiple leiomyomas were removed in toto, and histopathology confirmed leiomyoma. This case highlights the importance of considering Müllerian anomalies when pelvic examination and imaging findings do not completely explain the anatomy. Careful preoperative assessment and anticipation of altered pelvic anatomy are important for safe surgical management of large leiomyomas associated with uterine anomalies.

Keywords: Leiomyoma, Uterine didelphys, Müllerian anomaly, Fibroid, Hysterectomy, Abnormal uterine bleeding

INTRODUCTION

Uterine leiomyomas are common benign tumors arising from the myometrium and are an important structural cause of abnormal uterine bleeding. They are hormone-responsive lesions and may vary considerably in number, size, location and clinical presentation. Many women are asymptomatic, while symptomatic patients may present with heavy menstrual bleeding, pelvic pain, pressure symptoms, anemia, infertility or an enlarged uterus.[1,2] The FIGO PALM-COEIN system classifies leiomyoma as a structural cause of abnormal uterine bleeding and provides a standardized framework for describing leiomyoma-related bleeding.[3]

Congenital Müllerian anomalies result from abnormal development, fusion or resorption of the Müllerian ducts. Uterine didelphys is characterized by failure of fusion of the paired Müllerian ducts, resulting in two uterine cavities and typically two cervices, with a vaginal septum in some patients.[4,5] These anomalies may remain undiagnosed until reproductive age because clinical manifestations can be variable and imaging may not always clearly demonstrate the external uterine contour or duplicated cervices.[4,6]

The coexistence of symptomatic leiomyoma and uterine didelphys is particularly uncommon. A published case report described symptomatic leiomyomas occurring in

both uteri of a patient with uterine didelphys, emphasizing the rarity of this combination and the importance of individualized surgical planning.[7] Rare leiomyomas have also been reported in Müllerian remnants, where altered anatomy may make diagnosis difficult.[8,9]

The objective of this case report is to describe the clinical presentation, imaging findings and intraoperative discovery of uterine didelphys in a woman with a large symptomatic leiomyoma, and to highlight the diagnostic and surgical challenges associated with this rare combination.

CASE REPORT

A 43-year-old female was admitted to Civil Hospital, Ahmedabad, with heavy menstrual bleeding and lower abdominal pain for 9 months. On per-abdominal examination, the uterus was approximately 24 weeks in size and a mobile abdominal mass was palpable. Per-speculum examination revealed a vaginal septum. Per-vaginal examination confirmed the abdominal findings and both fornices were free.

The patient had a history of two normal vaginal deliveries and previous abdominal tubal ligation. Her hemoglobin was 7.4 g/dl; she received three units of packed red blood cells preoperatively. Other blood investigations were within normal limits. Pap smear showed metaplastic cells with an overall picture of moderate inflammatory smear.

Ultrasonography demonstrated a bulky uterus occupying the hypogastrium and both iliac fossae and extending up to the infraumbilical region, with altered echotexture. Multiple heterogeneous lesions with minimal internal vascularity were seen in the anterior and posterior uterine walls, suggestive of benign neoplastic lesions, particularly multiple fibroids. Tumor markers were within normal limits. A provisional diagnosis of abnormal uterine bleeding due to leiomyoma (AUB-L) was made.

In view of the large symptomatic fibroid burden, anemia, completed family and failure of previous medical treatment with norethisterone, the patient was planned for hysterectomy. At laparotomy, the urinary bladder was advanced over the fibroid. The visceral peritoneum overlying the leiomyoma was opened and the fibroid was enucleated. A huge posterior leiomyoma measuring approximately 15×15 cm was found, with bowel and mesentery attached posteriorly; these adhesions were carefully separated. Two additional leiomyomas measuring approximately 6×6 cm were attached to the main leiomyoma and were enucleated.

During the operation, two separate uteri with attached cornual structures and two cervices were identified. Both uteri with cervices and the multiple leiomyomas were removed in toto and sent for histopathological examination. A dye test was performed to confirm bladder integrity. Hemostasis was achieved, and the postoperative course was uneventful. Histopathological examination confirmed leiomyoma.

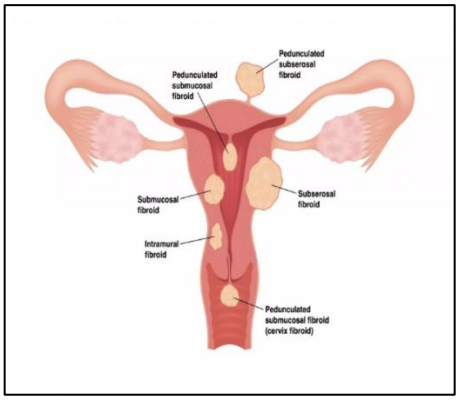

Figure 1: Operative view of the uterine anomaly and leiomyoma (posterior view).

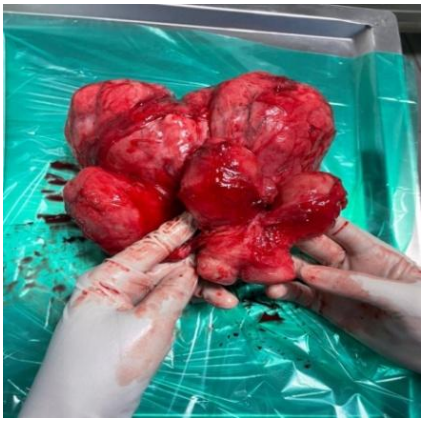

Figure 2: Operative view of the uterine anomaly and leiomyoma (anterior view).

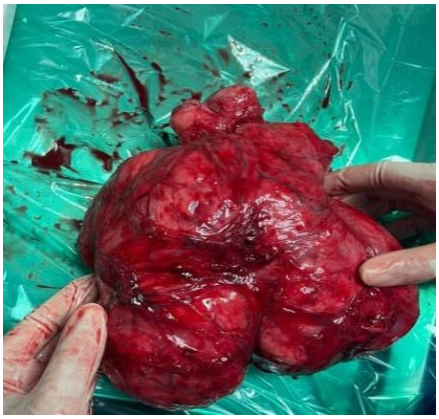

Figure 3: Operative/clinical image from the original manuscript.

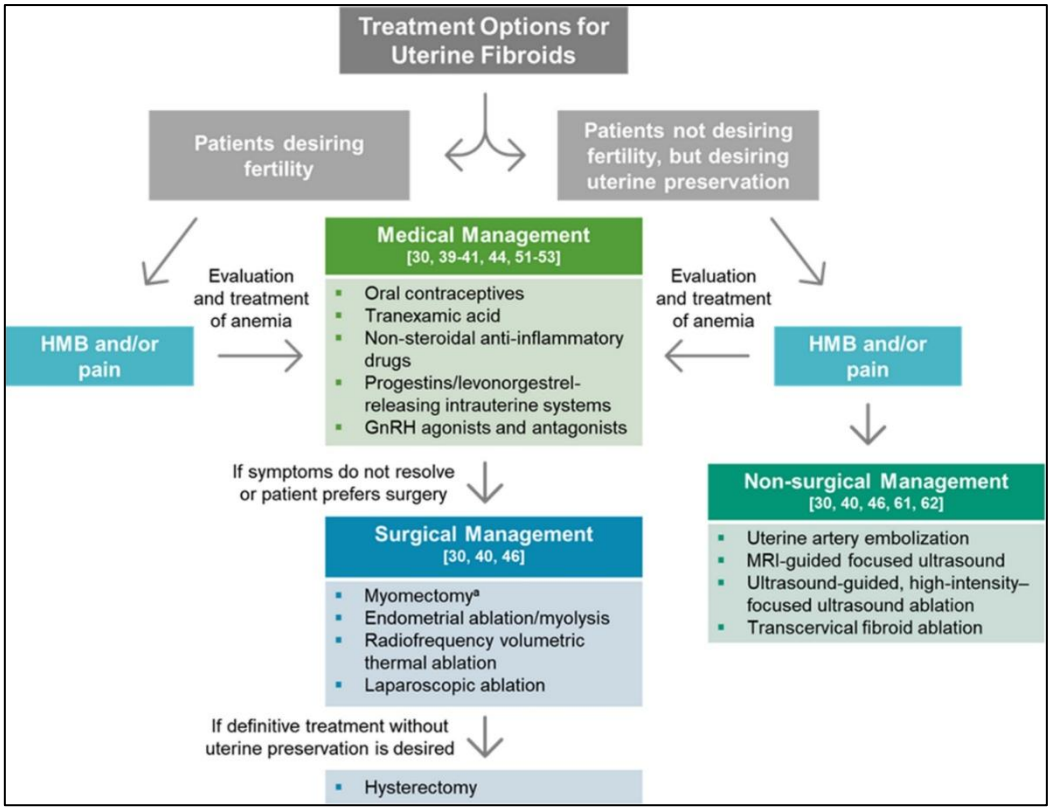

Figure 4: Operative/clinical image from the original manuscript.

DISCUSSION

The present case demonstrates the coexistence of a very large symptomatic leiomyoma with uterine didelphys that was not recognized on preoperative ultrasonography. Leiomyomas are common benign uterine tumors and can cause heavy menstrual bleeding, pelvic pain and anemia; the patient's symptoms and severe anemia are consistent with the recognized clinical spectrum of symptomatic fibroids.[1,2] Her 15×15 cm dominant lesion and additional leiomyomas explain the markedly enlarged uterus and the prolonged heavy bleeding.

The intraoperative finding of two uteri and two cervices is characteristic of uterine didelphys. Uterine didelphys results from failure of fusion of the paired Müllerian ducts and may be associated with a longitudinal vaginal septum and urinary tract anomalies.[4,5] In the present patient, a vaginal septum was detected clinically, but the duplicated uterine anatomy and two cervices were not identified preoperatively. This illustrates a recognized diagnostic challenge: two-dimensional ultrasound may be less accurate for defining the external uterine contour and distinguishing Müllerian anomalies, while complementary imaging can improve characterization when an anomaly is suspected.[5,6]

The rarity of the combination is supported by published literature. Defran et al reported a patient with uterine didelphys and symptomatic leiomyomas involving both uteri, demonstrating that leiomyomas can occur in this unusual anatomic setting and that management must be individualized.[7] Other case reports have described leiomyomas arising from Müllerian remnants and presenting as pelvic masses, emphasizing that altered Müllerian anatomy can lead to diagnostic uncertainty and that histopathology remains important for definitive diagnosis.[8,9]

In the present case, the provisional diagnosis was AUB-L and hysterectomy was selected after consideration of the patient's age, completed family, severe bleeding with anemia, large fibroid size and unsuccessful medical treatment. Current guidance supports individualized fibroid management according to symptoms, size and location, reproductive wishes and response to medical treatment; hysterectomy is a definitive option when fertility preservation is not desired and fibroids are very large or other treatments are unsuccessful.[2] The decision in this patient was therefore consistent with the clinical circumstances.

The intraoperative discovery of duplicated uteri underscores the importance of anticipating altered pelvic anatomy. Müllerian anomalies may be associated with other genital or renal abnormalities, and current classification systems such as the ASRM Müllerian Anomalies Classification 2021 emphasize standardized

anatomical description to improve diagnosis and communication.[5,10] In patients with a suspected Müllerian anomaly, careful assessment of the number of uterine cavities and cervices, vaginal anatomy and urinary tract anatomy may be useful for operative planning.

This case also demonstrates that a discrepancy between the clinical examination and imaging findings should prompt consideration of a congenital uterine anomaly, particularly when a vaginal septum is present. Although the diagnosis in this patient was established intraoperatively, recognition before surgery could potentially facilitate surgical planning by allowing better anticipation of the duplicated cervical and uterine anatomy.

CONCLUSION

Uterine leiomyoma associated with uterine didelphys is a rare clinical entity that can present with heavy menstrual bleeding, pelvic pain, anemia and a markedly enlarged abdomen. In this case, uterine didelphys was not recognized on preoperative ultrasonography and was diagnosed intraoperatively when two uteri and two cervices were identified. The case highlights the importance of considering Müllerian anomalies when clinical and imaging findings do not fully explain pelvic anatomy. For women with large symptomatic leiomyomas and completed family, hysterectomy may provide definitive treatment, but careful preoperative anatomical assessment is important to anticipate altered pelvic anatomy and minimize surgical complications

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