

# Hysteroscopic Findings in an Unusual Case of Adenomyosis

Priya Bhav Chittawar, Shilpa Sapre, Shilpa Bhandari

## ABSTRACT

Adenomyosis is the presence of ectopic endometrial glands and stroma in the myometrium. It traditionally presents with pelvic pain, menorrhagia and dysmenorrhea in the fourth or fifth decade of life. Here, we present a case of adenomyosis presenting with severe menorrhagia at the age of 23 years.

Traditionally, adenomyosis is diagnosed in histopathologically, in hysterectomy specimens or myometrial biopsies. Noninvasive modalities, such as transvaginal ultrasound and magnetic resonance imaging aid in diagnosis in the office before treatment is undertaken. Office hysteroscopy is an established tool in the diagnosis of abnormal uterine bleeding and infertility. While hysteroscopy does not have pathognomonic features of adenomyosis, certain patterns have been described in association with adenomyosis, including endometrial defects, abnormal vascularization and cystic hemorrhagic lesions.

In this case of adenomyosis, typical appearance of circumscribed endometrial defects on hysteroscopy was seen. This appearance has been described in literature but is the first report from India.

Hysteroscopy has the potential to be an important additional procedure for the evaluation of uterine pathology, even in the case of adenomyosis, because it offers the main advantage of direct visualization of the uterine cavity and the possibility of obtaining histological specimens under visual control.

With shifting focus toward conservative and fertility preserving management of adenomyosis, office hysteroscopy is likely to emerge as an important tool in the diagnostic armamentarium for adenomyosis.

**Keywords:** Adenomyosis, Hysteroscopy, Abnormal uterine bleeding.

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## INTRODUCTION

Adenomyosis is a benign disorder that is being increasingly diagnosed by noninvasive modalities, like transvaginal ultrasound and magnetic resonance imaging (MRI). Hysteroscopic picture of endometrial defects in adenomyosis has been described in literature once. We report one more case of adenomyosis presenting at an early age of 23 years with menorrhagia, with characteristic hysteroscopic picture of multiple circumscribed endometrial defects at the fundus.

## CASE REPORT

Mrs S, a 23-year-old nulligravida, was admitted in emergency with heavy bleeding since 20 days. She was admitted outside and given progesterone in high doses, 4 units of blood transfusions and referred to us as a case of

fibroid uterus for myomectomy. There was no history of preceding amenorrhea.

Her previous cycles were prolonged with progressively worsening bleeding, flooding and passage of clots since 2 years. She was married for 3 years, not using any contraception and was desirous of conception. She was pale with stable vitals. Examination revealed a uterus of 14 weeks in size, soft, mobile and tender with free fornices. Investigations revealed Hb of 7 gm%, beta hCG <1 IU/ml, thyroid function was normal, viral screen was negative and coagulation profile was normal. Transvaginal ultrasound scan revealed a bulky uterus with thick posterior wall and myometrial cysts (Figs 1 and 2). She was taken for an MRI which showed bulky uterus with T1 bright foci suggestive of blood in myometrium and T2 bright areas in myometrium suggestive of myometrial cysts (Figs 3 and 4).

She continued to bleed despite progesterone and was planned for a hysterolaparoscopy proceed. Hysteroscopy showed enlarged uterine cavity with endometrial defects at the fundus. The endometrial defects were seen as multiple punched out, circumscribed lesions in the fundal area. A myometrial biopsy was attempted but tissue was inadequate for comment histopathologically. Both ostia were deep seated and right ostium showed periosteal fibrosis. Decision to undertake laparoscopy was taken to ascertain tubal status and consider adenomyoma resection, if focal disease was found (Figs 5 and 6). On laparoscopy, a bulky uterus covered with dense omental adhesions was found; an adhesiolysis was done (Fig. 7). The posterior wall of the uterus was diffusely enlarged and we decided against focal resection. Endometriotic blebs were seen in the POD.



**Fig. 1:** Transvaginal ultrasound showing bulky uterus with myometrial cyst

POD was completely obliterated with dense bowel adhesions. Right ovary was normal. Left ovary was buried in POD. Final diagnosis was adenomyosis with stage IV endometriosis. Considering the wish for fertility, she was put on injection Lupron depot for 3 months and planned for IVF subsequently.

## DISCUSSION

Adenomyosis usually presents as dysmenorrhea, menorrhagia and chronic pelvic pain in multiparous women in the fourth or fifth decade of life.

The diagnosis was traditionally histopathological with hysterectomy specimens. With availability of imaging modalities, more and more cases are being diagnosed with transvaginal ultrasound and color Doppler and magnetic resonance ultrasound.

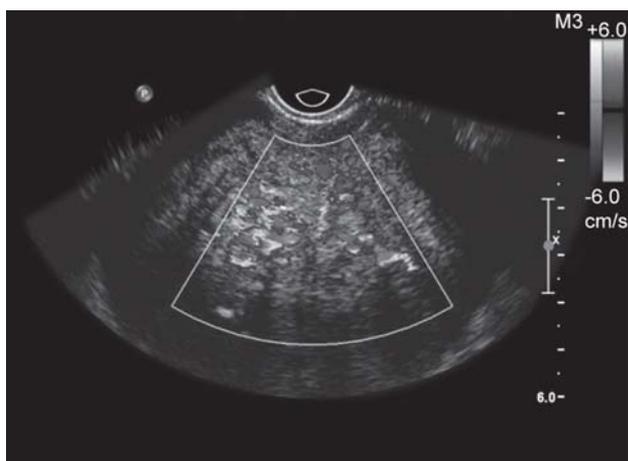
Also, atypical presentations are coming to the fore. In this patient, the disease presented early at the age of 23 years. We could not find any similar report in the literature of early presentation of adenomyosis. Menorrhagia was the presenting complaint in this case. All other causes of excessive bleeding were ruled out.

McCauseland et al postulated that myometrial hypertrophy is caused by the ectopic endometrial glands.<sup>1</sup> This dysfunctional myometrium is inefficient in contracting and tamponading the bleeding myometrial arterioles. Brosens showed that widened junctional zone has reduction in peristalsis compared to normal menstruating subendometrial zone and results in the menorrhagia.<sup>2</sup>

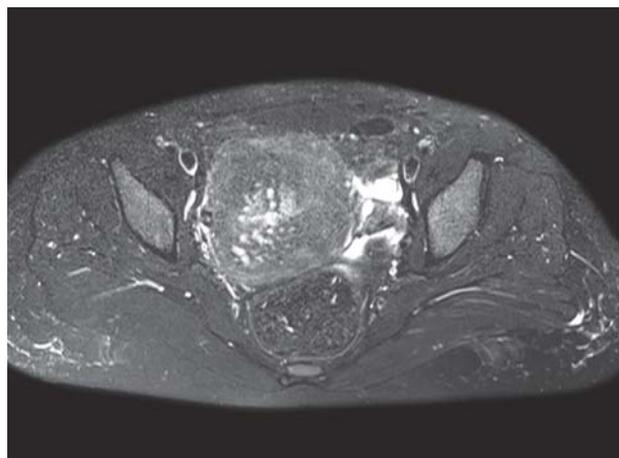
In this case, the patient was referred as a case of fibroid uterus.

Transvaginal ultrasound has a sensitivity, specificity, positive and negative predictive values of 76.4, 92.8, 73.8 and 88.8% respectively, in the diagnosis of adenomyosis. Typical ultrasound features of adenomyosis differentiating it from fibroid uterus are described.<sup>3</sup>

The features that differentiate it from fibroid are echo texture which is not uniform, with poorly defined borders, minimal mass effect on the endometrium or the serosa relative to the size of the lesion, elliptical rather than globular shape, lack of edge shadowing; 'shaggy' or whorled appearance of the endometrium, small myometrial cysts or spaces scattered throughout the myometrium, echogenic



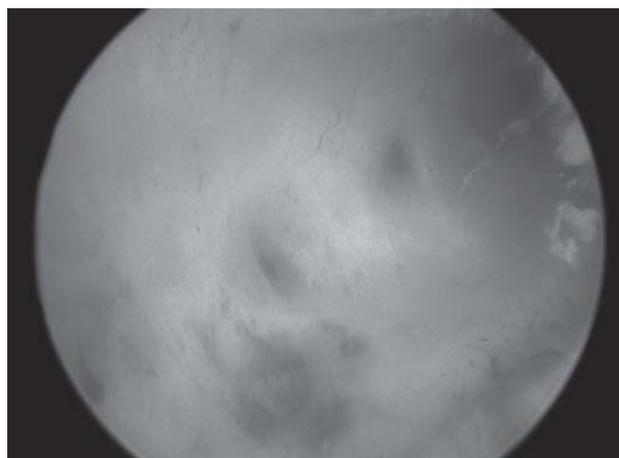
**Fig. 2:** Transvaginal color Doppler showing diffuse color flow



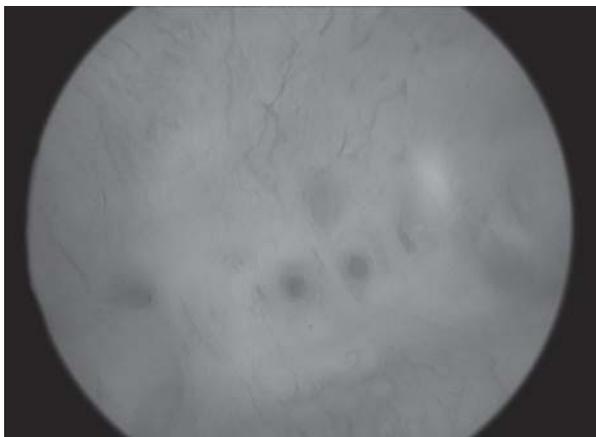
**Fig. 4:** MRI: T2 axial image showing symmetrically enlarged uterus with T2 bright areas suggestive of myometrial cysts



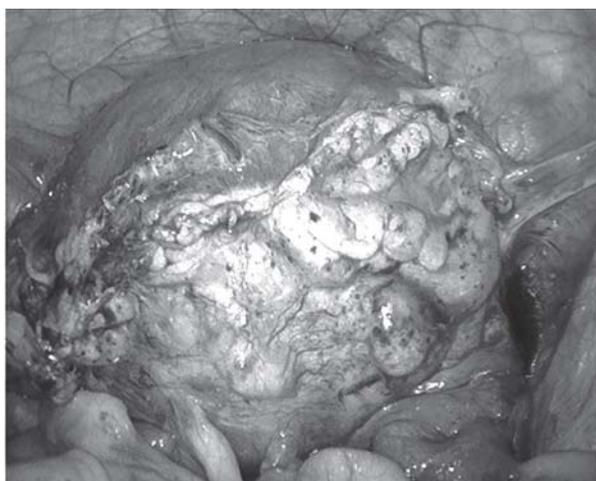
**Fig. 3:** MRI: T1 axial image showing bulky uterus with T1 bright areas suggestive of hemorrhage in the myometrium



**Fig. 5:** Hysteroscopy showing defects at the fundus



**Fig. 6:** Multiple circumscribed fundal lesions seen on hysteroscopy



**Fig. 7:** Laparoscopy showing bulky uterus with omental adhesions

nodules or linear striations radiating out from the endometrium into the myometrium and the absence of circular vascularization at the border of the lesion. MRI is particularly amenable to diagnosis with an accuracy of almost 99%.<sup>4</sup> Hysteroscopy has been demonstrated to be an important additional procedure for the evaluation of uterine pathology, even in the case of adenomyosis, because it offers the main advantage of direct visualization of the uterine cavity and the possibility of obtaining histological specimens under visual control.<sup>5</sup>

Campo et al described characteristic appearance of endometrial cavity on hysteroscopy, including abnormal endometrial vascularity, irregular endometrium with defects or small openings on the surface and cystic hemorrhagic lesions in the cavity.<sup>5</sup> In this case, an appearance exactly similar to that described by Campo et al was observed on hysteroscopy showing endometrial defects in the fundal area.

While hysteroscopy alone cannot diagnose or rule out adenomyosis, the typical endometrial lesions associated with it can aid in the diagnosis when accompanied by a transvaginal ultrasound. This can enable clinicians to decide on taking an endomyometrial biopsy when the hysteroscopic picture is suggestive of adenomyosis.

An office hysteroscopy has emerged as one of the primary investigations in cases of abnormal uterine bleeding and infertility. If the diagnosis of adenomyosis is not kept in mind, the appearance of circular endometrial defects can be confused with intrauterine adhesions leading to unnecessary operative intervention. Such a picture has been reported only once but is probably under-reported due to low awareness among clinicians.

Awareness of the hysteroscopic picture can aid clinicians in clinching the diagnosis of adenomyosis early thereby tailoring the treatment according to the symptoms and conditions.

Recognition and research on the endometrial effects of adenomyosis will also help in elucidating the etiology of the negative impact adenomyosis has on implantation and pregnancy rates in IVF.<sup>6</sup>

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