

Incidental Adenomyosis Finding, A Cause of Recurrent Miscarriages

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Abstract

Background

Adenomyosis has been known to affect fertility and it is a common cause of recurrent miscarriages. Pregnancy with co-existing adenomyosis requires multidisciplinary approach of management involving the attending Obstetricians and Gynaecologists, Radiologists, Clinical psychologists, Neonatologists and other ancillary health workers due to increased risk of miscarriages and fetal wastage associated with pregnancies in an adenomyomatous uterus. The risk factors for adenomyosis include previous uterine surgeries, increased maternal age, multiparity and myomatous uterus. It has also been seen in young women as an incidental finding during evaluation for infertility. It is not life-threatening condition, but it could reduce the woman's quality of life because of its distressing symptoms. This case report was aimed at highlighting the importance of early ultrasound monitoring in management of patients with recurrent miscarriages.

Case Report

We present a booked 29year old G5P0+4 who presented with bleeding per vaginum at a gestational age of 12 weeks + 4 days on the day of presentation. She was managed as a case of threatened miscarriage, and was placed on tablet Vasoprin 75mg daily for 2 weeks, oral progestogen dydrogesterone (duphaston) 20mg daily for 4 weeks. She had ultrasound indicated cervical cerclage at GA of 14 weeks, following progressive shortening of the cervix. She had an elective caesarean section at GA of 37 weeks due to mal-presentation, with intraoperative findings of features of adenomyosis. The delivery was complicated by primary post-partum haemorrhage due to uterine atony which was promptly managed by the use of uterotonics. She received 2 units of blood. The postoperative period was otherwise uneventful and she was discharged home on day 7 post-partum.

Keywords: Adenomyosis, Pregnancy, Miscarriage, Fetus, Gestational Age

1.Introduction

Adenomyosis still remains a mysterious disease ever since it was first described in the 19th century. It is a benign condition of the corpus uteri, defined as the presence of functional endometrial glands and stroma in the myometrium. It could be of the focal variety if circumscribed nodules of endometrial glands and stroma are surrounded by normal endometrium or of the diffused variety if the endometrial glands and stroma are distributed throughout the myometrium as found in our patient. Most times, it is asymptomatic but it could present with chronic pelvic pain, dysmenorrhea, heavy menstrual bleeding and infertility [1-3].

Risk factors for development of Adenomyosis include advancing maternal age, multiparity, previous uterine surgeries like myomectomy and caesarean sections^{2,3,4}. However, it could be an incidental finding in women undergoing evaluation for infertility. It could also co-exist with other uterine pathologies like Leiomyoma uteri and endometriosis¹. The exact cause of Adenomyosis is not known but a lot of postulations have been made concerning its aetiology^{4,5}. One of such theories is based on the invagination of endometrial basalis into the myometrium. This may be due to implanting of endometrial glands into the myometrium through uterine surgeries, allowing growth of ectopic endometrial glands and stroma into the myometrium.

It could also result from immunological mechanisms such as local production of oestrogen by the adenomyomatous tissue. Other theories describe a de novo origin of Adenomyosis from misplaced pluripotent mullerian remnant. This is an aberration of development [4-6].

The exact prevalence of this disease in our environment is not known due to differences in diagnostic criteria, paucity of pathologists and MRI in most Sub-Saharan African countries. It is also related to differences in the patient's population of studies. The diagnosis of Adenomyosis appear to be more common in women between the age of 40 and 50 years (70-80%), than in women under 39 years (5-25%) and in postmenopausal women (5-10%). The diagnosis of Adenomyosis also poses a lot of challenges due to lack of harmony in diagnostic tools and criteria. Hysterectomy and Histology were traditionally used for definitive diagnosis but this had its disadvantages especially in Sub-Saharan African where many women have strong dislike to hysterectomy. Again, the histological criteria used for the diagnosis and staging of adenomyosis were not uniform. Recently, advances in imaging techniques such as TVS and MRI are non-invasive methods of diagnosing adenomyosis. Ultrasound findings include the presence of bulky uterus which cannot be explained by the presence of uterine leiomyoma, asymmetric thickness of the anterior and posterior uterine walls (pseudo-widening sign), cystic myometrium with junctional zone not clearly visible, thickening of the junctional zone and heterogenous echogenicity of the myometrium [5-7].

2. Case Report

We present a booked 29-year-old G5P0+4 Realtor who hails from Ukawu in Onicha LGA of Ebonyi State but lives at Mgbabo, behind Presco Campus, Abakaliki. She is a Christian of Dominion City denomination. Her last menstrual period was on 21st October, 2024, giving her an expected date of Delivery of 28th July, 2023 and estimated Gestational age of 12 weeks + 4 days at presentation. She presented to the Obstetric emergency room on 10th of February, 2025 with complaint of spotting per vaginum of about 2 hours prior to presentation. The spotting per vaginum was said to be spontaneous in onset, scanty, bright red in colour, but there was no passage of clots. She has used about 2 slightly mildly soaked perineal pads to contain the bleeding. There was no history of trauma to the abdomen, abdominal pain, fever or urinary symptoms and no attempt to terminate the pregnancy. There was no history of passage of vesicles or fleshy materials per vaginum, shoulder tip pain, dizziness, palpitations, fainting spells or loss of consciousness. Between 2018 and 2021, she has had 4 recurrent spontaneous miscarriages at average gestational ages of 8-10 weeks respectively. The miscarriages were managed medically at private hospitals and there were no post-abortal complications. She attained menarche at the age of 13, menstruates for 3-4 days in a regular 28 days cycle. She has been having heavy menstrual bleeding and dysmenorrhea since she attained menarche. There was no history of termination of pregnancy in the past. She was aware of pap smear but yet to do it. She was aware of contraceptive but does not use any method. Her past medical and surgical histories were not relevant and other aspects of

her medical history were not significant.

At presentation, she was not in any distress, not pale anicteric, acyanotic and afebrile. Her abdomen was nice and soft, no tenderness. Uterus was about 15 weeks size. Speculum examination shows blood smeared vulva and vaginal. Os was closed and there was no active bleeding. Findings were discussed with her and she was admitted into the Gynaecology Emergency. Haematological investigations were done and all were within normal limits. Pelvic ultrasound done showed a viable fetus at a gestational age of 12 weeks with widespread asymmetric myometrial thickening, subendometrial echogenic linear striations and irregular endometrial-myometrial junctions which are features of coexisting adenomyosis. She was counseled on the findings and line of management.

She was given tablet Vasoprin 75mg daily for 2 weeks, oral progestogen Dydrogesterone (Duphaston) 20mg daily for 4 weeks. She was also given haematinics. She was on observation till 24 hours after the bleeding and she was discharged home. She had another episode of slight bleeding two weeks later, and she had a repeated scan. It shows normal intrauterine fetus at GA of 14 weeks, and there was a progressive shortening of the length of the cervix compared to what it was 2 weeks before. The cervical length of 3.5cm in the first scan has reduced to 2cm. She was counseled on the findings, given the option of cervical cerclage and she consented to the procedure. She cervical cerclage inserted the following day under general anaesthesia.

She had an anomaly scan at 20 weeks which was normal. At 28 weeks gestation, she presented with features of preterm contractions. She was admitted into the Antenatal ward and managed for urinary tract and malaria in pregnancy. At 37 weeks gestation, she was delivered of a live male neonate via caesarean section due to mal-presentation at term. The uterus was bulky and the anterior and posterior layers of the uterus were asymmetrically enlarged. The surgery was complicated with primary post-partum haemorrhage due to uterine atony. It was promptly managed by the use of uterotonics. She received 2 units of blood. The baby weighed 2.5kg with good APGAR scores. She was subsequently discharged home on the 7th day post-partum. She was reviewed in the postnatal clinic in 6th week postpartum and there was no complaint. Baby's growth were linear and she was counseled on immunization, family planning and exclusive breastfeeding for the baby.

3. Discussion

This is a case of incidental finding of adenomyosis during pregnancy. Management of infertility in the presence of adenomyosis poses a lot of challenges to the attending Gynaecologist. Many studies confirm that Adenomyosis impacts negatively on fertility^{6,7}, causing an increased risk of miscarriages and fetal wastages as seen in our patient, and a decrease in pregnancy and live birth rates. It can also cause preterm contractions as seen in our patient, preterm rupture of membranes and preterm delivery. However, the exact mechanisms by which adenomyosis causes these still remain

elusive or unclear. One of the reasons for the difficulty in accurately predicting the negative effects of adenomyosis in fertility is its high coexistence with other uterine anomalies like endometriosis and uterine myoma.

Theories have been put in place to explain the risk of infertility in patients with Adenomyosis. They include the presence of anatomical distortions caused by the bulky uterus which affects sperm transport, embryo transfer and implantation of the embryo. There is also abnormal utero-tubal gamete transport and disruption of endometrial function and receptivity. Again, irregular muscle contraction due to impairment of calcium circulation can lead to hyperactivity of the myometrium. This may impair sperm progression^{2,5,7,8}. Other postulations include cornual occlusion observed in many patients with adenomyosis. A recent systemic review and meta-analysis by Nirginnakis K et al⁵ revealed that adenomyosis is associated with a significantly lower clinical pregnancy rate (OR 0.69; 95% CI 0.51-0.94) and higher rate of miscarriage (OR 2.17; 95% CI 1.24-3.80) after ART. On the other hand, no significant difference in live birth rate [6-10].

The pharmacological treatment of patient with Adenomyosis and co-existing dysmenorrhea is based on symptomatology. This is because the data concerning the treatment of patients with Adenomyosis and pregnancy is still inconclusive. In fact, there is no existing drug that can cure adenomyosis at present, but some off-label treatment options may be used to tackle disease symptoms and improve fertility outcomes. For our patient, acetaminophen was the analgesic of choice because of the recurrent abdominal pain that she was having. We also used antispasmodics to compliment the effect of analgesics, it helps to relieve pain and improve the overall quality of life of the patient. Oral progesterone such as Dydrogesterone (Duphaston) was given to her up till 28 weeks gestation. As in endometriosis, progesterone receptors in adenomyotic uteri are either diminished or inactive, thus inhibiting the action of both local and systemic progesterone forms. This was the reason why progestogen was given to her for an extended period [9-11].

Declaration

Authors Contribution

All the authors contributed actively in both management of this patient and in the writing of this case report.

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Conflict of Interest

We declared that there is no conflict of interest in developing and writing of this case report.

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