

Uterine Fibroids Association with Pregnancy-induced Hypertension: A Case Report

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ABSTRACT

Fibroids in early pregnancy were associated with an increased risk of hypertensive disorders of pregnancy. It has been seen that fibroids undergo rapid and remarkable growth during pregnancy, particularly in the first half. The effects of fibroids on blood pressure (BP) may be amplified by the rapid expansion of fibroids during pregnancy; we present a unique case report where a normotensive patient with uterine fibroid developed preeclampsia at 34-weeks gestational age.

Keywords: Case report, Fibroids, Hypertension, Pregnancy.

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INTRODUCTION

The incidence of fibroids in pregnancy ranges from 0.1 to 10.7% of all pregnant women and it increases with increasing maternal age.¹ Due to delay in childbearing age, the incidence of fibroids during pregnancy is likely to increase in the coming years.

Several studies have demonstrated that the risk of hypertension is higher in women with uterine fibroids than in those without uterine fibroids.²⁻⁴ Uterine fibroids are generally asymptomatic, and most patients are not detected until early pregnancy by obstetrical ultrasound. In addition, the effects of fibroids on blood pressure (BP) may be amplified by the rapid expansion of fibroids during pregnancy.^{5,6} The most important factors in determining morbidity in pregnancy include fibroid number, size, location, and relationship to placenta implantation. Here, we present a unique case report where a normotensive patient with uterine fibroid developed preeclampsia at 34-weeks gestational age.

CASE DESCRIPTION

A 29-year-old G2P1L1 visited the antenatal outpatient department (OPD) at 6 weeks, she had conceived after her infertility treatment. Her BP was 126/80 mm Hg; her body mass index (BMI) was 23 kg/m²; and on ultrasound, a 53 mm × 55 mm × 52 mm fibroid on lateral aspect was found with a single live intrauterine gestational sac. Her dual and quadruple markers were normal and at 20 weeks her uterine artery pulsatility index was normal. At 25 weeks, the size of the fibroid was increased to 73 mm × 70 mm in the posterior wall and 16 mm × 8 mm in the anterior wall; she was in continuous follow-up and there was an increase in the size of the fibroid as pregnancy advanced. She was normotensive with no history of preeclampsia in the last pregnancy and no family history of hypertension. At her antenatal visit at 34 weeks, her BP was recorded as 180/120 mm Hg for which oral antihypertensive labetalol was started but her BP could not be controlled with oral antihypertensive even after 10 days; she also developed complaints of headache and epigastric pain and on ultrasound 77 mm × 77 mm fibroid in the posterior wall and 34 mm × 27 mm in the anterior wall was observed. She was immediately admitted in labor room

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and intravenous antihypertensive was given to control the BP and magnesium sulfate and corticosteroids were covered; however, as her BP was not decreasing, a decision was taken for an emergency lower segment cesarean section. She delivered a healthy baby of weight 2.3 kg with good appearance, pulse, grimace, activity, and respiration (APGAR). Intraoperatively, she had an atonic postpartum hemorrhage, which was managed by uterotonics. Postoperatively, there were no complications and the patient and baby were discharged in satisfactory condition.

DISCUSSION

Fibroids are usually asymptomatic but pain is the most common complication in pregnancy and is seen most often in large fibroids (>5 cm) during the second and third trimesters.⁷ Fibroids may negatively affect fertility and the outcome of the pregnancy and have been complicated by abdominal pain and red degeneration of fibroid, spontaneous abortion, fetal malposition, placental abruption, premature rupture of membranes, increased rate of cesarean deliveries, postpartum hemorrhage, preterm delivery, and low birth weight infants.⁸

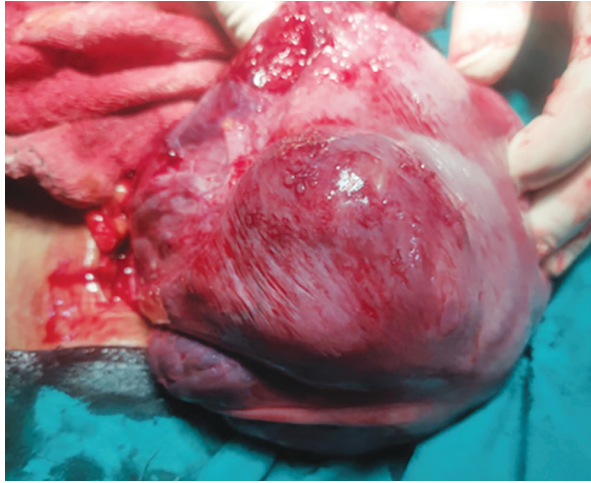


Fig. 1: Intraoperative finding of uterine fibroid

Takeda et al. reported in a cross-sectional study that the prevalence of hypertension was significantly higher in patients with uterine fibroids than in those without them (14.6 vs 0.63%, $p < 0.001$).²

Chen et al. recently reported in a cohort study that uterine fibroids in early pregnancy were associated with an increased risk of hypertensive disorders during pregnancy.⁹

It has been seen that fibroids undergo rapid and remarkable growth during pregnancy, particularly in the first trimester.¹⁰ Hence, it is reasonable to speculate that the rapid expansion of fibroids in early pregnancy may result in poor placental perfusion by compressing uterine blood vessels, which contributes to the increased risk of pulmonary embolism (PE). Moreover, fibroid-related inflammatory response and cytokine imbalance may serve as underlying mechanisms for uterine fibroids and hypertension. However, studies with a larger sample size are required to further explore the potential mechanisms.

CONCLUSION

We have to be meticulous while managing pregnancy with uterine fibroids as they are significantly associated with an increased risk of PE in pregnant women. Therefore, pregnancy has to be cautiously screened in the antenatal period, through regular follow-ups, to detect any adverse obstetric complications and to improve the outcome.

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