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## Case Report

# An unusual case of retained placenta managed by hysterotomy

Suneeta Singh<sup>1\*</sup>, Bhupesh Kumar Goyal<sup>2</sup>, Sanjay Kumar Sharma<sup>1</sup>,  
Atiya Aziz<sup>2</sup>, Jeevan Mesta<sup>1</sup>

<sup>1</sup>Department of Obstetrics and Gynecology, Armed Forces Medical College, Pune, Maharashtra, India

<sup>2</sup>Department of Obstetrics and Gynecology, Command Hospital Southern Command, Pune, Maharashtra, India

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### \*Correspondence:

Dr. Suneeta Singh,

E-mail: [suneetasingh01@gmail.com](mailto:suneetasingh01@gmail.com)

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## ABSTRACT

When the placenta does not expel after 30 minutes of delivery of fetus it is said to be retained. It can be a cause of post-partum haemorrhage. It may result from poor uterine contractions. The most common source of a trapped placenta is from a partial closure of the cervix and/or a contracted lower uterine segment. We present an unusual case of a retained placenta trapped in a myometrial sacculum at the left angular region of the uterus.

**Keywords:** Unusual, Retained placenta, Hysterotomy

## INTRODUCTION

Retained placenta is a major contributor to maternal mortality and morbidity, particularly in developing regions. The incidence of retained placenta varies widely across the globe, affecting between 0.1% to 3.3% of vaginal deliveries, depending on the population under consideration.<sup>1</sup> In this report, we present an unusual case of retained placenta.

## CASE REPORT

A 37-year-old lady G2A1 at 28 weeks 3 days POG with gestational diabetes on medical nutritional therapy and gestational hypertension was admitted on 26 December 2022 with bleeding per vaginum and intermittent pain abdomen. She had been admitted earlier also during present pregnancy at 24 weeks with complaint of vaginal bleeding. Ultrasound showed fundus-posteriorly located placenta without any evidence of abruption. She was discharged after 2 days of observation.

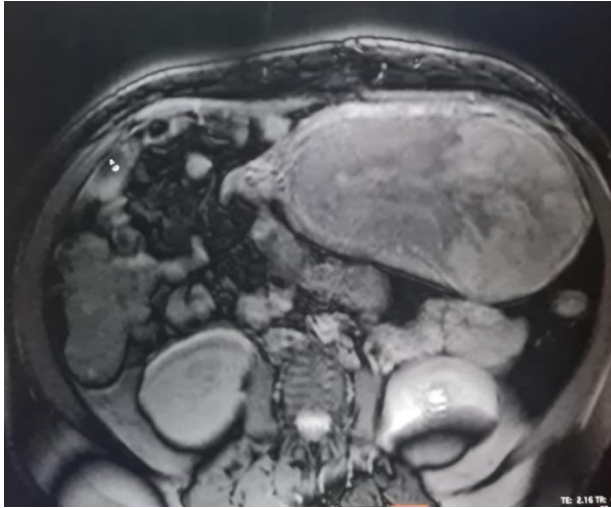
Upon the latest admission, the patient was stable, and no significant vaginal bleeding was observed. Uterine

contractions were absent, and surfactant induction was administered. Approximately two weeks later, on 11th January 2023, she underwent spontaneous preterm vaginal delivery at 31 weeks and 1-day gestational age at 23:07 hours. Active management of the third stage of labor was performed, but despite 40 minutes of controlled cord traction, uterine massage, IV oxytocin (20 units in 500 mL normal saline at 125 ml/hr), the placenta could not be delivered.

She was then taken to the operating room for manual removal of placenta under general anaesthesia but only bits and pieces of placental tissues could be removed. It was tried under ultrasound guidance too but placenta was felt to be impacted at the left cornual region and the myometrium behind the placenta was appreciated to be very thin. The attempt of manual removal of placenta was thus abandoned.

Patient was shifted back to ward waiting for spontaneous expulsion. Her post procedure Hb was 7.4 gm/dl. She was transfused 2 units of PRBCs. Oxytocin infusion was given @ 24 mIU/min for 6 hours. She was given broad spectrum

antibiotics in view of the retained placenta. Oxytocin infusion was given the next day also.



**Figure 1: Placenta accreta or an impacted placenta with significant thinning of the myometrium at the left angular region anteriorly.**

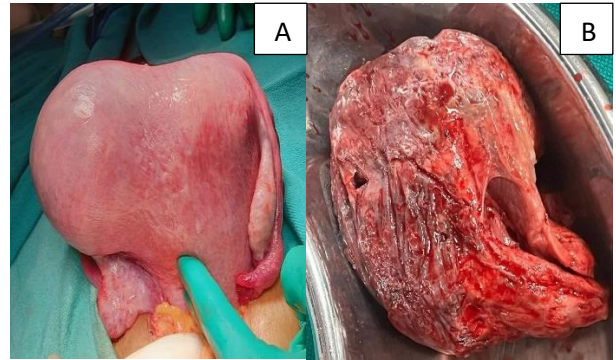


**Figure 2: Placenta accreta or an impacted placenta with significant thinning of the myometrium at the left angular region and posteriorly.**

Although the patient reported passing clots, there was no passage of the placental tissue per vaginum. A pelvic ultrasound done on 14th January 2023 revealed retained placenta measuring 11×6.5×3.1 cm. The patient remained hemodynamically stable, and after discussing the diagnosis and various management options, she opted for expectant management. Unfortunately, after one week of waiting, the placenta was not spontaneously expelled. An MRI performed on 18<sup>th</sup> January 2023 suggested the possibility of placenta accreta or an impacted placenta with significant thinning of the myometrium at the left angular region anteriorly and posteriorly (Figure 1 and 2).

Subsequently, the patient was counselled for operative treatment.

After obtaining informed consent following discussions with both the patient and her husband, it was decided to proceed with a final attempt at manual placental removal and possible curettage under general anaesthesia. If unsuccessful, the plan was to perform a laparotomy with potential hysterotomy and hysterectomy in case of myometrial placental invasion.



**Figure 3 (A and B): The uterus was bulging at the left angular region and complete removal.**

On 20<sup>th</sup> January 2023, a manual removal of placenta was attempted under ultrasound guidance but proved unsuccessful. Subsequently, a laparotomy was performed. During the procedure, it was observed that the uterus was bulging at the left angular region (as shown in Figure 3). A small incision of approximately 6 cm was made over the most prominent area of uterine bulging, allowing for the complete removal of the retained placenta. Importantly, there was no evidence of abnormal invasive placental invasion. The uterus was closed with a two-layer suture.

Post operative period was uneventful. The newborn baby, born prematurely, was discharged after spending three weeks in the Neonatal Intensive Care Unit (NICU). Patient was counselled about the potential risk of uterine rupture in next pregnancy.

## DISCUSSION

Worldwide, there is no universal consensus on the precise duration that defines a 'retained' placenta and necessitates intervention. Intrapartum guidelines developed by the National Institute of Health and Clinical Excellence (NICE) suggest considering intervention when the placenta remains undelivered for 30 minutes after birth.<sup>2</sup> In contrast, the World Health Organization (WHO) recommends extending the waiting period to 60 minutes.<sup>3</sup>

There are three primary types of retained placenta following vaginal delivery: placenta adherens, which occurs when the myometrium behind the placenta fails to contract; trapped placenta, where a detached placenta becomes trapped behind a closed cervix; and partial

accreta, which involves a small area of accreta preventing detachment.<sup>1</sup> Chronic retained placenta is a rare occurrence, particularly in primiparous women with no history of surgery or trauma. Additionally, trapped placenta can be a complication in cases of a septate uterus, requiring hysterotomy after failed attempts at manual placental removal.<sup>4</sup> In our specific case, the placenta was trapped within the left myometrial sacculaton, just medial to the left cornual region. Despite administering general anaesthesia, we were unable to reach and remove the placenta. This situation is akin to previously documented cases of 'angular pregnancies'.<sup>6</sup>

Angular pregnancy refers to implantation of the embryo just medial to the utero-tubal junction, in the lateral angle of the uterine cavity, whereas interstitial pregnancy refers to the implantation in the intramural portion of the fallopian tube and is a true ectopic pregnancy.<sup>5</sup> The critical differential feature is that the fertilized ovum of an interstitial pregnancy essentially develops in the uterine wall, whereas in an angular pregnancy it develops toward the uterine cavity and that might probably be the reason for a more favourable outcome of a majority of angular pregnancies. Angular pregnancy is a high-risk clinical entity as it may be associated with complications during pregnancy like persistent uterine pain and bleeding, spontaneous abortion, ruptured uterus and rarely retained placenta.

## CONCLUSION

In conclusion, the effective treatment for retained placenta is manual removal of the placenta under general anaesthesia. This procedure should ideally be performed within a few hours of delivery to prevent the risk of haemorrhage. An alternative approach involves the injection of oxytocin into the umbilical vein with the aim of promoting the contraction of retro-placental myometrium and facilitating placental detachment. However, it's important to note that retained placenta can, in rare cases, result from uncommon pathologies such as

placenta adherence, septate uterus with trapped placenta, or exceptionally, myometrial sacculaton observed in angular pregnancies. Healthcare providers should consider these unusual causes whenever manual removal fails, as they may necessitate surgical management.

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