

# Challenging Presentations of Retained Products of Conception: A Case Series

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## ABSTRACT

A fraction of the trophoblastic tissue that remains in the uterus after an abortion or a full-term vaginal delivery is referred to as “retained products of conception” that can have varied manifestations like persistent vaginal bleeding, acute abnormal uterine bleeding (AUB), abdominal pain, sepsis, chronic pelvic pain, shock, pyometra, hematometra and in long term may lead to subfertility and secondary amenorrhea. Due to absence of diagnostic clues, resulted in missed or delayed diagnosis that further lead to trial therapies, thus possess a challenge to treating physician. The diagnostic modalities may include ultrasonography with color Doppler, hysteroscopy, but the gold standard test is histopathological examination (HPE). We present unusual clinical presentations of retained POCs at our center for the benefit of widening the diagnostic horizon of this particular pregnancy complication.

**Keywords:** Abnormal uterine bleeding, Abortion, Retained product of conception.

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## BACKGROUND

Retained products of conception refer to a portion of trophoblastic tissue retained in the uterine cavity after abortion or full-term vaginal delivery. It is estimated to complicate approximately 1% of term pregnancies.<sup>1</sup> It can present as continuous vaginal bleeding (94%), metritis, chronic pelvic pain, fever, or dirty discharge per vaginam.<sup>2</sup> Usually, an antecedent pregnancy event is present. But rarely, the presentations are the different and unusual and classic clinical presentations of pregnancy events. Bleeding per vaginam is absent and poses a diagnostic challenge to physicians and thus results in unwanted investigations and trial therapies. Serum  $\beta$ -human chorionic gonadotropin ( $\beta$ -hCG) may be checked, but they often contribute to little importance for making the diagnosis as necrotic retained product of conceptions (POCs) do not actively secrete the hormone. The most imperative aim was to distinguish from arterio venous (AV) malformation, which is the primary differential in these cases. While the majority of retained POCs can be managed medically, sometimes surgical evacuation is required. Whereas on the other hand surgical intervention is almost contraindicated in arterio venous malformation (AVM). We present unusual clinical presentations of retained POCs at our center for the benefit of widening the diagnostic horizon of this particular pregnancy complication.

## CASES

### Case 1

A 34-year-old woman bearing a parity of three and having three live issues presented to gynecology outpatient department (OPD) with off and on bleeding per vaginam for 2 months. It was neither preceded by any overdue nor history of intake of any abortifacient in the recent past. Her last childbirth was 6 months back. She reported no preceding complaints of nausea, vomiting, or pain. The pregnancy test was done at our center and was negative. There was a history of dilatation and curettage (D&C) done twice

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in one month at private clinics. On physical examination, she was well built, and her vitals were stable. No abnormality was detected on systemic examination. Her abdomen was soft and not tender. Pelvic examination revealed bleeding from the cervical os along with normal uterine size. Blood investigations along with hormonal profile were done that reported no abnormality.  $\beta$ -hCG was done that was 4 m $\mu$ /L. We did hysteroscopy which revealed stage 1 Asherman's (March classification) and a pale polypoidal mass near right-sided cornua (Figs 1 and 2). Polypectomy was done and histopathology was reported as a retained POC with features of accreta.

### Case 2

The case 2 presented as a case of acute abnormal uterine bleeding (AUB). A 30-year-old P2L2A1 patient came to emergency having profuse bleeding per vaginam with shock having a pulse of 136/min, BP 90/60 mm Hg, and RR 28/min with labored breathing. Approximately 1 hour prior to the presentation, she had a syncopal episode. There was no history of overdue or abortifacient intake. There was no preceding pain. The patient reported her last

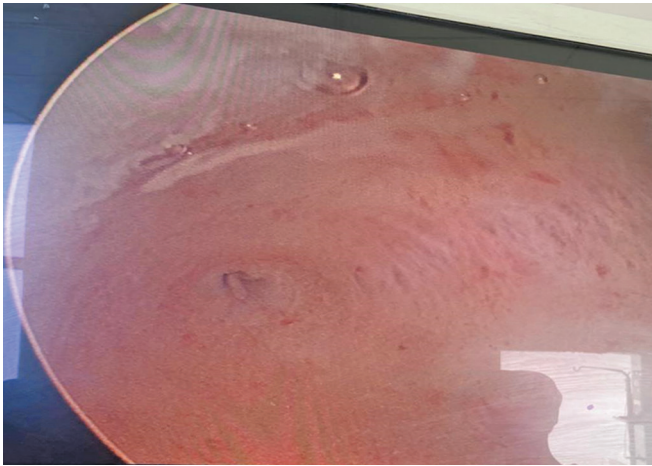


Fig. 1: Polypoidal mass near cornua of uterus (IN CASE 1)

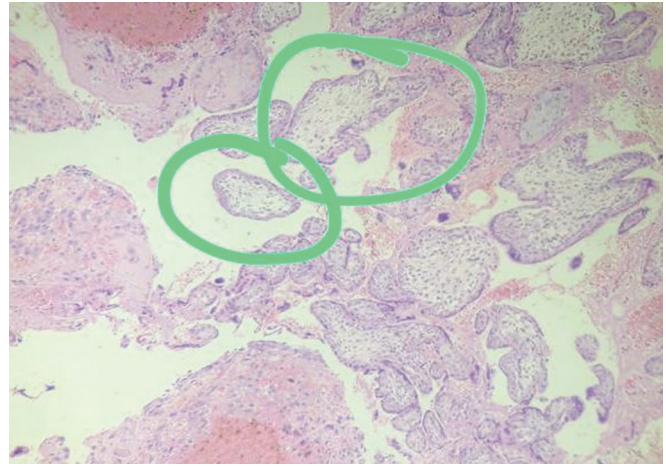


Fig. 3: Chorionic villus in histopathology (IN CASE 2)



Fig. 2: Polypoidal mass near cornua of uterus (IN CASE 1)



Fig. 4: Hematometra (IN CASE 3)

menstrual cycle 7 days back that lasted for 2 days. The pregnancy test was done and it was negative. The patient appeared anxious and pale. Her abdomen was soft and not tender. On vaginal examination, fleshy products were seen and os was around 2 cm. The pelvic examination confirmed the vaginal findings and the uterus was normal size with absent cervical motion tenderness and bilateral fornices clear. The patient was resuscitated and with a high risk consent and 2 units packed red blood cells (PRBCs) for transfusion, and the patient was taken up for evacuation. Histopathological examination report of the tissue confirmed the presence of chorionic villi in the sample (Fig. 3).  $\beta$ -hCG was done and was reported to be 15  $\mu$ /L.

### Case 3

The third case was 28-year-old P2L1 presented to gynecology OPD with amenorrhea of 3 months. There was a history of multiple treatments for suspected endometriosis and hematometra at private clinics before presentation to our center. At our center, the pregnancy test was done and it was negative. The patient was examined and the ultrasound was done. Ultrasonography (USG) reported an intramural fibroid of size 3  $\times$  2 cm and minimal free fluid in the endometrial cavity suggestive of hematometra (Fig. 4). The patient was investigated, reporting no endocrinological

abnormality. Endometrial sampling was done. The sample was sent for HPE evaluation that further reported the presence of retained products of conception.

### Case 4

The fourth case was 23-year-old nulligravid female married for 7 months and presented to gynecology OPD with heavy and prolonged vaginal bleeding for 3 months. Her pregnancy test was negative. She looked pale and anxious. Her vitals were noted to be stable and a per speculum examination revealed a closed cervical os with bleeding noted, emanating from the uterine cavity. Her outside USG reported AV malformation, but when repeated at our center, the presence of polyp was seen with the presence of vascularity. The patient had taken multiple treatments outside our center, but no relief was there. Her hysteroscopy was planned after investigation. Hysteroscopy revealed the presence of growth around 2  $\times$  2 cm near the fundus of the uterus and was sent for HPE that reported the presence of chorionic villi in the sample.

## DISCUSSION

Subfertility, shock, prolonged abdominal pain, sepsis, secondary amenorrhea, pyometra, hematometra, persistent vaginal bleeding,

and acute AUB are only a few of the many manifestations that are shown in case reports from diverse studies. The lack of classical diagnostic clues resulted in missed or delayed diagnoses in the majority of cases. Three of the patients in our cases had no prior amenorrhea history, and the urine pregnancy test (UPT) resulted in a negative result for all four patients. As a result, clinically, the possibility of additional early pregnancy issues was also eliminated. When a diagnosis is uncertain, a HPE should be done. In all four cases, HPE verified the presence of chorionic villi.

Many studies show that most patients with retained POCs present with vaginal bleeding within days to a week following pregnancy resolution. However, retained product of conceptions (RPOCs) have been found to persist in patients for multiple years, like in our first case there was hysteroscopic removal of POCs that presented as polyps having features of placenta accreta.<sup>3</sup> Also, there was a history of D&C done twice in the past that has associated risk of uterine perforation, infection, and can have delayed sequelae like Asherman syndrome and subsequent infertility. According to Yu et al., D&C is regarded as “blind,” and the risk of intrauterine adhesions is up to 30% and for prevention of adhesions, curettage is to be avoided.<sup>4</sup> Using operational hysteroscopy enables the direct vision of the uterine cavity, allowing the surgeon to remove RPOC in a targeted and exact manner. It also enables visual confirmation of the removal of RPOC in its entirety, thus considered superior at achieving complete uterine evacuation, with RPOC remaining present in only 1.4% of cases treated hysteroscopically compared to 28.8% of cases treated with conventional blind suction D&C.<sup>5,6</sup>

Acute AUB may occur either due to obstetric reasons or gynecological reasons. In early pregnancy, bleeding per vaginam has reasons like ectopic pregnancy (9/1,000), molar pregnancy (1/160), scar pregnancy (14/10,000), abortions, infected retained products of conception, and cyclical bleeding. In our second case, the patient had no preceding history of amenorrhea or abortifacient intake and her cycle was 7-day back that lasted for 2 days and the patient was unaware of the pregnancy as her cycles were regular. HPE shows the presence of chorionic villi. This could be due to cyclical bleeding that has an incidence up to 20% which can last up to 12 weeks of pregnancy until decidual space is obliterated by fusion of deciduas vera and capsularis, and out of them 15–20% end in miscarriages.<sup>7</sup> In literature, cyclical bleeding was reported as a denial to pregnancy up to the third trimester.<sup>8</sup> Unstable cervical endometrium and pseudomenstruation from the decidua have also been reported as a cause of cyclical bleeding.<sup>9</sup> Also, other causes like ectopic pregnancy and molar pregnancy have been ruled out on the basis of examination and  $\beta$ -hCG levels.

The diagnosis of RPOC is predicated on the sonographic appearance of intrauterine echogenic material, which is beneficial in the evaluation of RPOC. Although transvaginal sonography improves examination for RPOC, necrotic decidua and blood clots can be very difficult to distinguish from RPOC, making the diagnosis challenging at times.<sup>10</sup> As in our third case, hematometra was the presentation of RPOC. Because of this, using grayscale and color Doppler US in combination can enhance the estimation of suspected RPOC and enable real-time evaluation of uterine architecture and blood flow. A thickened endometrial echo complex (EEC) is the RPOC grayscale US result that is the most sensitive. In the literature, the precise term “thickened” ranges from 8 to 13 mm. A thickening EEC or endometrial mass level of vascularity can enhance the diagnostic evaluation of RPOC. The degree of

**Table 1:** Gutenberg classification: ultrasonographic patterns of RPOC (Tinelli and Haimovich)<sup>10</sup>

|          |  |
|----------|--|
| Type 0   | Hyperechogenic avascular mass                                |
| Type I   | Different echoes with minimal or no vascularity              |
| Type II  | Highly vascularized mass confined to the cavity              |
| Type III | Highly vascularized mass with highly vascularized myometrium |

vascularity of the endometrial component can be compared with the myometrial vascularity in the same image segment and graded in order to better define the typical color Doppler US findings of RPOC Table 1.<sup>11</sup>

Kamaya et al.<sup>12</sup> evaluated ultrasound images of patients with suspected RPOC and categorized them into one of four types based on Doppler imaging features. This was the first attempt to classify RPOC based on Doppler vascularity. The four types ranged from Type 0 (avascular) to Type III (marked vascularity). This Doppler characterization was then adapted to create the Gutenberg classification.

Uterine AVM could present in various ways from asymptomatic to episodic vaginal bleeding to life-threatening torrential vaginal bleeding and having other differentials like RPOC and gestational trophoblastic disease (GTD).<sup>13</sup> A transvaginal sonography with color Doppler overestimates AVM. RPOC can be distinguished from AVMs on the basis of the vascular endometrial components seen in RPOC, whereas uterine AVMs primarily involve only the myometrium. But in our fourth case, it was the presence of chorionic villi thus ruling out AVM and the patient improved after that.

## CONCLUSION

- Abortions can have an atypical presentation like hematometra, persistent amenorrhea, and chronic pelvic pain.
- Classical history of amenorrhea may not always be preceding.
- Such presentations lead to unnecessary interventions and delays in management.
- Histopathological evaluation clinches the diagnosis.

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