

Atypical Presentation of Retained Products of Conception after Early Pregnancy Loss Mimicking Gestational Trophoblastic Disease

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Abstract: Retained products of conception (POC) complicate pregnancy frequently. The rate of RPOC after early pregnancy loss is approximately 4%. The clinical presentations of retained products of conception mimic those of gestational trophoblastic disease. Accurate differentiation is difficult based on clinical history and physical examination alone which leads to management dilemma. The distinction between these two entities is extremely important as the two are treated with different approach. Herein, we discuss a case of infected & degenerated retained products of conception which was initially misdiagnosed as trophoblastic disease in a 25-year-old woman as after dilatation and curettage for miscarriage.

Keywords: Retained products of conception (RPOC), Miscarriage, Gestational trophoblastic disease, Hysteroscopy for RPOC, Early pregnancy loss, RPOC

1. Introduction

Retained products of conception (RPOC) are a clinical entity which denotes intrauterine tissue (placental and/or fetal tissue) which develops after conception and persists after a spontaneous pregnancy loss (miscarriage), planned pregnancy termination, or preterm/term birth (vaginal or cesarean). Mostly, this intrauterine tissue is of placental origin. [1] The rate of retained products of conception (RPOC) after early pregnancy loss has been reported to be 0.4%-3.8%. [2] The characteristic clinical manifestations of RPOC include one or more of the following: uterine bleeding, pelvic pain, fever, and/or uterine tenderness. If these symptoms persist after definite treatment of RPOCs then first differential kept is gestational trophoblastic disease. Further evaluation, workup and treatment is conducted on the working diagnosis of gestational trophoblastic disease.

Herein, we discuss a case of infected & degenerated retained products of conception which was initially misdiagnosed as trophoblastic disease in a 25-year-old woman as after dilatation and curettage for miscarriage.

2. Case Summary

A 25-year-old P0010 woman was referred to our outpatient obgyn department with suspicion of gestational trophoblastic neoplasia. This patient had spontaneous conception 7 months back. After confirming pregnancy with urinary hCG, her first sonography reported intrauterine fetal demise at 8 weeks' gestation. Her sonography was repeated after 1 week which also showed fetal demise. She underwent dilatation and curettage for the same. Her post procedure ultrasound confirmed normal uterine cavity with no retained products of conception.

Patient was apparently fine for 2 months, after dilatation and curettage. She didn't resume her periods. After 2 months, patient started feeling heaviness in pelvis and distension in abdomen. For few months she didn't report anywhere, after which she noticed remarkable increase in her symptomatology. For the same she consulted at our institute and was evaluated. On ultrasonography she was found to have bulky uterus with a large heterogeneously hypoechoic lesion of size 11 cm x 9 cm x 7 cm with multiple cystic areas within it with loss of endometrial-myometrial interface which was more along right lateral uterine wall. Fluid was also seen surrounding this lesion within endometrial cavity. Internal os was closed with no obvious fetal pole. On colour doppler the mass showed mild peripheral vascularity. Her β -hCG levels were evaluated and found to be 2062.51mIU/ml. Keeping differential diagnosis of gestational trophoblastic disease; she was subjected to MRI pelvis. MRI pelvis showed anteverted uterus measuring about 14.5 cm * 9.3 * 12 cm (Fig 1).

Endometrial cavity was distended by heterogenous mass & fluid in total measuring 12 cm * 7.8 cm * 10 cm the zonal structure of uterus was distorted with myometrial thinning. No extension to parametrium was seen. Multiple patches of T1 hyper intensities were seen within mass suggestive of sub-acute haemorrhage. Multiple patches of restricted diffusion were also seen. Focal invasion of myometrium was seen in fundus region. Few prominent vascular were seen at periphery. B/l ovaries were normal. Vagina was normal. There was no free fluid in pelvis. Ultrasound & MRI, both showed features suggestive of gestational trophoblastic tumor. Her consecutive, weekly β -hCG levels were 1780 & 1800 mIU/ml respectively.

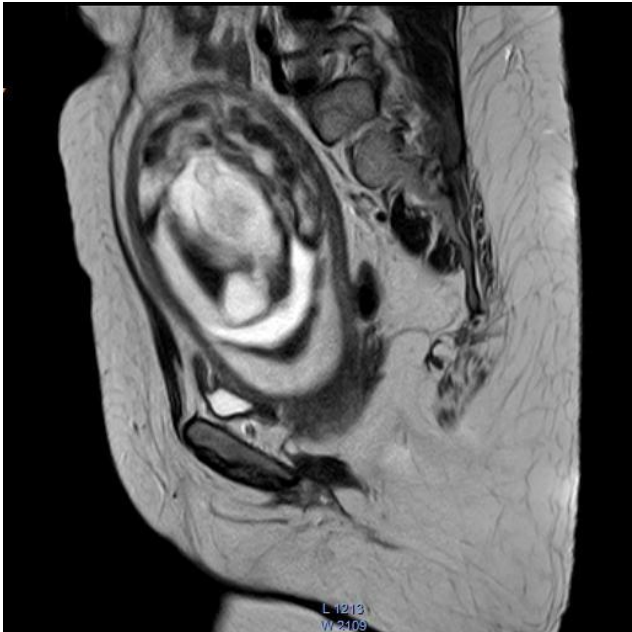


Figure 1: MRI imaging of pelvis with uterine mass

On examination she was afebrile and hemodynamically stable. Her abdominal examination showed uterus corresponding to 16-18 weeks gravid size. On vaginal examination her uterus corresponding to 16-18 weeks gravid size with normal bilateral adnexae. She was further evaluated on lines of low-risk gestational trophoblastic neoplasia. Her CT scan thorax didn't reveal any abnormality. For establishing a diagnosis an office biopsy of endometrial pathology was sent. Histopathology of endometrial sample revealed fibrinous & haemorrhagic debris, decidual tissue and areas of necrosis along with few fragmented bits of endometrial tissue. There was no evidence of chorionic villi, trophoblastic tissue or gestational trophoblastic disease. Her repeat β -hCG level was 1860 mIU/ml. Her blood examination was normal except leucocytosis with total leucocyte count 19500 /cumm. She was planned for removal of products under vision. She underwent hysteroscopic removal of products under spinal anaesthesia. On hysteroscopy endocervical canal was healthy, internal os was healthy looking. Mass was present inside the uterus which was predominantly present in body and fundal region. This mass was cribriform, dirty white in appearance. There was vascularity at the peripheral areas with areas of old haemorrhage within the mass. Whole collection was removed hysteroscopically using resectoscope. The mass was not densely adherent to uterine walls. Approximately 200–300 grams mass / products of conception were removed. Products were firm in consistency with organised haemorrhage in between. Post procedure her leucocyte count dropped to 8000 /cumm. Her final histopathology of the products showed no evidence of chorionic villi, trophoblastic tissue or gestational trophoblastic disease. (Fig 2) Tissue showed extensive fibrinous & haemorrhagic debris with areas of necrosis, with lymphocytic infiltration.

Patient was on follow-up for 1 year and had no complains. She resumes her menstrual cycle after 45 days of hysteroscopic removal of RPOCs.

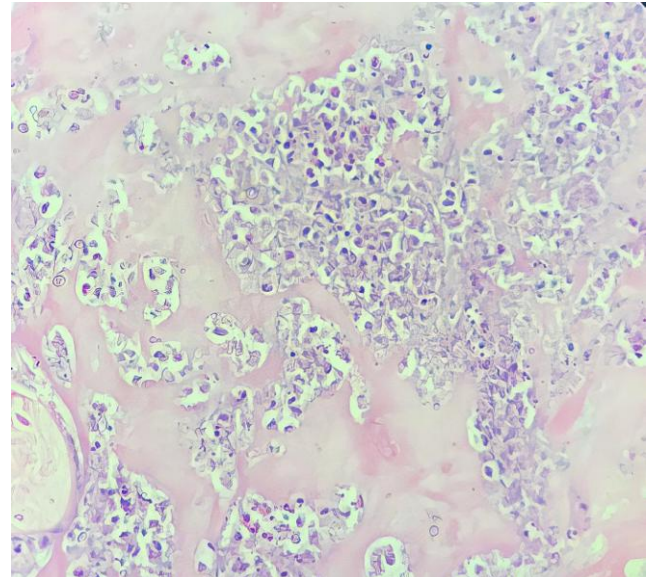


Figure 2: Microscopic tissue examination revealing extensive fibrinous material with areas of necrosis and lymphocytic infiltration

3. Discussion

Spontaneous miscarriage frequently leads to intrauterine retention of gestational complex which is treated by expectant, medical management or surgical management. [3, 4] Surgical treatment is given either immediately or following the failure of expectant or medical treatment. In Indian medical practices dilatation and curettage is frequently performed in most centers. Dilatation and curettage is a blind procedure, and can therefore, leave behind products of conception. These products may not be diagnosed initially. The characteristic clinical manifestations in this scenario can be uterine bleeding, pelvic pain, fever, and/or uterine tenderness. Their persistence may be complicated by chronic infection and may require further surgical intervention.

The presenting symptoms of these retained products can mimic those of gestational trophoblastic disease. [5] Hence it becomes difficult differentiate the two clinical entities on clinical history and physical examination alone. Serum β -hCG level falls to an undetectable level over 2-3 weeks in patients with retained products whereas in gestational trophoblastic disease β -hCG levels remain elevated.

The distinction between these two entities is extremely important as the treatment approach is different in both. Retained products of conception may be treated conservatively or with repeat curettage whereas gestational trophoblastic disease may require detailed evaluation and need of chemotherapy. [6]

In our case, the symptomatology became evident after 7 months of gestational event. After seven months post-surgical evacuation, complains of abdominal distension and elevated serum β -hCG level is unusual for retained POC. Abdominal distension, raised serum β -hCG level and presence of intrauterine mass in our described case was strong indicator for suspicion of proliferating

pathology. It can be hypothesized that remains of viable trophoblastic tissue, which were left after curettage, proliferated with time. Afterwards, due to infection, trophoblastic tissue became non-viable.

Approach of definite treatment in such dilemmatic situation can be tricky. As histologic subtype of gestational trophoblastic disease, placental site trophoblastic disease, present with normal or only slightly elevated serum β -hCG levels. Hence, role of serum β -hCG levels becomes guarded when we want to differentiate between retained POC and gestational trophoblastic disease.

The diagnosis of intra uterine lesions is based mainly on the characteristics of the grayscale and colour Doppler on ultrasound. [7] On ultrasound, features of gestational trophoblastic disease show heterogeneous echogenicity, which are sponge-like or honeycomb-shaped. These features can be seen in retained POCs. On MR imaging findings in retained POC overlap with those of gestational trophoblastic disease. Retained POC appears as an intrauterine soft tissue mass with variable T1 and T2 signal intensities with, variable amounts of enhancing tissue, variable degree of myometrium thinning and obliteration of the junctional zone, on MR imaging. [6] Hence, it becomes difficult to make a definitive distinction between retained POC and gestational trophoblastic disease on imaging.

Hysteroscopy has been proven as treatment approach for removal of retained POCs. Hysteroscopic removal of retained POCs is favored as it can clearly visualize the retention product and helps its clean removal. Moreover, hysteroscopically, integrity of the endometrial cavity is maintained and trauma to the adjacent endometrium is prevented. Thus, it limits the complications of surgery and the number of repeat interventions required further. [8] These advantages are not possible with dilatation and curettage as it is a blind procedure. We adopted hysteroscopic approach in our case as dilatation and curettage was already performed in the same and we intended to decrease further chances of retained products after procedure.

4. Conclusion

Our case was a diagnostic dilemma with completely different differential diagnoses. Due to similar imaging features and clinical presentations, retained POCs and gestational trophoblastic disease thus complicates the clinical diagnosis and management. Therefore, in clinical practice, for women of childbearing age who present with irregular vaginal bleeding, abdominal pain, pelvic masses, and abnormal blood β -hCG levels, the possibility of Retained POCs or GTN must be considered when determining a differential diagnosis.

5. Future Scope

More literature / case reports are required to analyze in which diagnostic dilemma was posed by Retained POCs and gestational trophoblastic disease. It will help in

understanding the atypical clinical behaviour of Retained POCs and constructing an algorithm for treatment in such clinical scenario.

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