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Case report

Conservative treatment for hypervascularised placental polyp with secondary haemoperitoneum: a case report

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Abstract. *Objective:* We describe the first case to our knowledge of hypervascularised placental polyp (HPP) presenting with acute pelvic pain and hemoperitoneum. *Case Report:* A 33 years-old woman with a history of medical abortion three months earlier came to our attention complaining acute pelvic pain and vaginal bleeding. Transvaginal (TV) and transabdominal (TA) ultrasound (US) demonstrated a highly vascular intrauterine lesion and intra-abdominal free fluid consistent with a diagnosis of haemoperitoneum. Emergency laparoscopy yielded no intra-abdominal bleeding and was followed by bilateral selective embolization of the uterine arteries due to persistent vaginal bleeding. Hysteroscopy and pathology findings were consistent with a final diagnosis of HPP. *Conclusion:* HPP may occur months or years after pregnancy or abortion and the clinical picture of abnormal vaginal bleeding associated with acute abdominal pain and haemoperitoneum should warrant to consider HPP among the differential diagnosis. Clinical and imaging findings need to be considered when planning the conservative management of HPP. Our experience suggests that uterine artery embolization is a safe and effective for the conservative treatment of highly vascularized HPP. (www.actabiomedica.it)

Key words: retained products of conception, ERPC, uterine artery embolization, early pregnancy complications, interventional radiology.

Introduction

Hypervascularised placental polyp (HPP) accounts for 6% of all placental polyps, with an overall estimated incidence of 0.25% of all pregnancies, and from a diagnostic and therapeutic point of view is not dissimilar to arteriovenous malformation (AVM) (1). HPP can be responsible for life-threatening bleeding requiring transfusions and need for additional treatment such as interventional radiology procedures with possible hysterectomy as a life-saving treatment (2). In this paper we describe a case of HPP presenting with acute pelvic pain and hemoperitoneum, which was diagnosed in a patient with a recent history of medical abortion.

Case report

A 33 years-old para 2 woman with a history of medical abortion three months earlier was referred complaining pelvic pain and acute vaginal bleeding. On admission the patient was apyrexial, tachycardic and hypotensive. Hemoglobin was 9.0 grams/dl and human chorionic gonadotropin (hCG) level was 9.98 mUI/milliliter. Transvaginal (TV) and transabdominal (TA) ultrasound (US) showed an inhomogeneous and intrauterine lesion measuring 45x35 millimeters **(Figure 1a)**, which was characterized by high vascularity and appeared to deeply infiltrate the posterior uterine wall (**Figure 1b**). Intra-abdominal free fluid consistent with a diagnosis of haemoperitoneum was

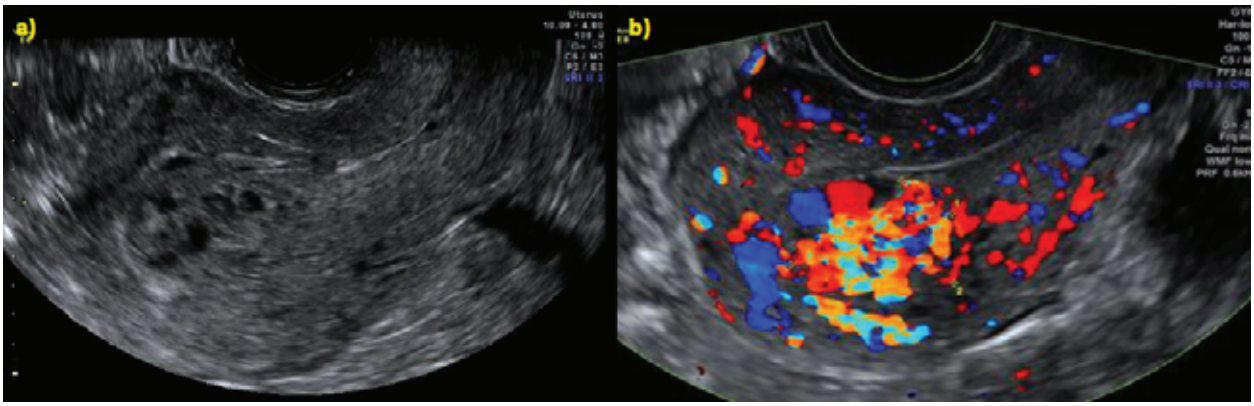

Figure 1. Sonographic appearance of the hypervascularised placental polyp (HPP) at 2D transvaginal ultrasound (US). **a)** On 2D gray scale US the HPP appears as a iso/hyperechoic and inhomogeneous lesion located within the uterine cavity. **b)** High vascularity and deep extension within the uterine wall can be demonstrated at Color Doppler US.

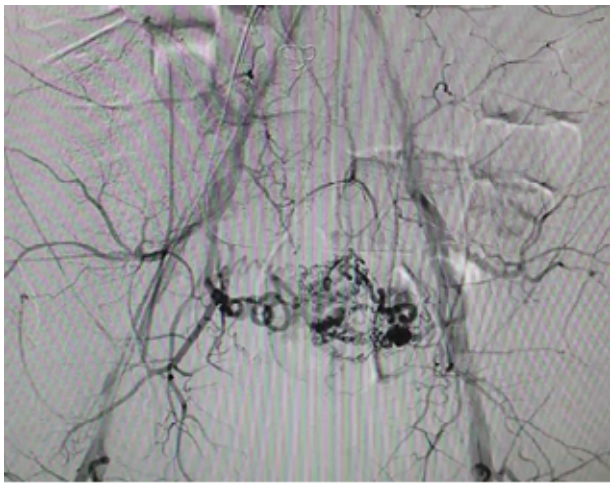

Figure 2. Angiographic findings showing the hypervascularized intrauterine lesion, which is supplied by bilateral vascularization.

demonstrated. An emergency laparoscopy was performed, and 800 milliliters of blood were drained, however no obvious lesion potentially responsible for the intraabdominal bleeding was noted. The patient was referred to the Radiology Unit for angiography, which showed bilaterally enlarged feeding vessels (**Figure 2**). Hence, bilateral selective embolization of the uterine arteries was performed. On the following day diagnostic hysteroscopy demonstrated an exophytic lesion measuring approximately 4 cm in maximal diameter on the posterior-left lateral uterine wall. Pathology report on biopsy specimen showed findings consistent with a final diagnosis of HPP. On clinical follow up hCG became undetectable 4 weeks later and the intrauterine lesion was no longer noted at follow up. The patient reported normal resumption of the periods and 30 months later delivered a normally grown neonate at term gestation.

Discussion

Placenta polyp (PP) can be suspected in all women reporting abnormal bleeding after spontaneous delivery or medical abortion and more rarely following miscarriage or caesarean section (3). HPP represents the most important variant of PP from a clinical point of view given its potential association with acute life-threatening bleeding occurring either spontaneously or in the case of ERPC (Evacuation of Retained Products of Conception) procedures.

Even though a final diagnosis of HPP can be made only on the pathology specimen, 2D US with Doppler represents the gold standard approach for the clinical diagnosis of HPP as it allows the accurate characterization of the intrauterine mass and the evaluation of the degree and the extent of the vascularity of the lesion (4). 2D US also allows the differential diagnosis between HPP and AVM, the former usually presenting with bilateral vascularization and developing predominantly within the uterine cavity, the latter being characterized by unilateral blood supply

developing mainly within the uterine wall (4). Additionally, HPP is characterized by low levels of HCG, which is negative in the case of AVM.

As most women affected by HPP are of childbearing age, the treatment goal is to remove the cause of the bleeding without compromising the future fertility. Among the available options, none of which has reached agreement among experts, expectant management has been used in the case of self-limiting bleeding associated with low Color Doppler score (5) based on the assumption that local vasospasm and secondary ischemic hypoxia may determine the spontaneous reduction of the vascularization of the lesion (6). Nevertheless, this option has been associated with recurrent massive haemorrhage and need for blood transfusion or hysterectomy (4). Operative hysteroscopy is usually performed in the event of low Color Doppler score in asymptomatic women with incidental diagnosis of HPP, however is not eligible for acute PP. Finally, selective embolization of the uterine arteries is advised for highly vascularized HPP in the event of major bleeding with secondary anemia in haemodynamically stable women (2). This approach has been related to an increased risk of complication such as pelvic infections, pelvic pain and tissue ischemia (7). Furthermore, its actual complication rate and impact on future fertility within the context of HPP is yet to be determined, although this is likely to be similar to that of selective embolization of the uterine arteries for other reasons (8).

In conclusion, the clinical picture of abnormal vaginal bleeding associated with acute abdominal pain and haemoperitoneum should warrant the consideration of HPP in the diagnostic workup. Clinical and imaging findings need to be considered when planning the conservative management of HPP, for which uterine artery embolization can be considered a safe and effective approach.

Conflict of interest: Each author declares that he or she has no commercial associations (e.g., consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article.

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