Placental Polyp: A Case Report

Wiset Watcharotone, M.D. Chairat Leelaphatanadit, M.D.
Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok 10700, Thailand.

ABSTRACT

A 28-year-old widow, gravida 1, para 1 which took place ten years earlier, presented with heavy bleeding from the vagina. Pelvic examination revealed a hemorrhagic and necrotic mass protruding from the external cervical os. Further investigations demonstrated a positive urine pregnancy test and a low titer of serum beta-hCG (53.6 mIU/ml). Ultrasonography and color Doppler imaging showed a hyperechoic and hypovascularized mass in the cervical canal. During subsequent planned tissue biopsy, the bleeding was uncontrollable, thus a total abdominal hysterectomy was performed. The pathologic findings were compatible with a placental polyp.
Keywords: Placental polyp; Ghost chorionic villi

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Placental polyp is an intrauterine polypoid or pedunculated mass of placental tissue retaining for an indefinite period after delivery or abortion.[1] Because of its rarity, the literature contains few references and there are great varieties not only on its diagnosis but also the management. Since 1998, only one case was diagnosed at our hospital. The intriguing clinical course is reported and discussed below.

CASE REPORT

A 28-year-old Thai woman, gravida 1, para 1, was admitted to a gynecologic ward at Siriraj Hospital due to periodical heavy vaginal bleeding for one day, following three weeks of spotting vaginal bleeding. Her delivery was ten years earlier via vaginal route without any postpartum complication. Her husband had died for six years in a car accident, thereafter she denied any sexual contact. Her menstruation was normal and the last period was four weeks before the admission. Pelvic examination on admission revealed a hemorrhagic and necrotic mass, approximately three centimeters in diameter, protruding from the external os of well-epithelialized cervix (Fig 1). The uterus, both the adnexa and parametrium were normal. The initial diagnosis was choriocarcinoma. Therefore the following investigations were performed: urine pregnancy test was positive, and serum beta-hCG level was 53.6 mIU/ml. An abdominal ultrasound showed a heterogeneous hyperechoic mass, measuring 4.5 x 2.9 centimeters, confined to the cervical canal. Color Doppler sonography revealed low vessel density and high impedance flow at both central (Pulsatility index [PI]=1.21, resistance index [RI]=0.70) and peripheral (PI=1.59, RI=0.81) area of the mass.

The initial diagnosis was equivocal, thus the definite diagnosis by tissue pathology was planned. Prior to undergoing a tissue biopsy in the operating room, the patient was counseled of the risk of excessive bleeding necessitating hysterectomy. During the subsequent meticulous biopsy with punch tissue forceps, profuse and uncontrollable bleeding occurred. Consequently, a total abdominal hysterectomy was performed.

Pathological examination of the uterus showed a pedunculated hemorrhagic and necrotic mass, measured four centimeters at the greatest diameter. The pedicle was about two centimeters, originating from the fundal region (Fig 2). Microscopically, the sections of the uterus, at pedicle of the mass, revealed hypertrophy of myometrial tissue, necrotic decidua, numerous small arterioles, organized blood clot, ghost and fresh trophoblastic villi (Fig 3a). The mass contained predominantly organized blood clot, ghost trophoblastic villi and fibrin deposition, interlaced with fresh or healthy-appearing trophoblastic villi (Fig 3b). The gross and microscopic findings were compatible with the placental polyp.

On the 5th day after the operation, serum beta-hCG was negative (1.6 mIU/ml). The postoperative course was uneventful and the patient was discharged from the hospital on the 7th day.

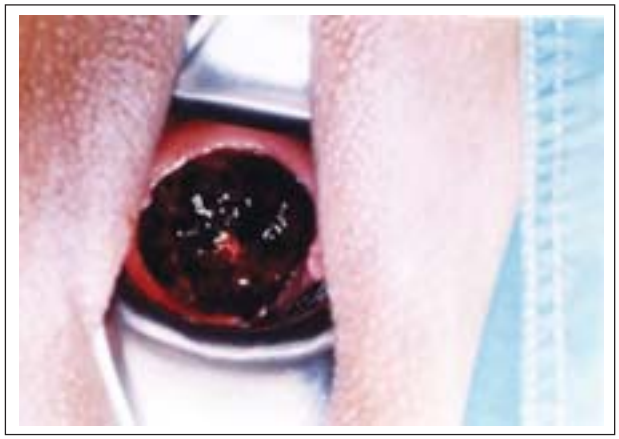

Fig 1. Hemorrhagic and necrotic mass protruding from the well-epithelialized cervix

Correspondence to: Wiset Watcharotone
E-mail: WISET_NE@yahoo.com

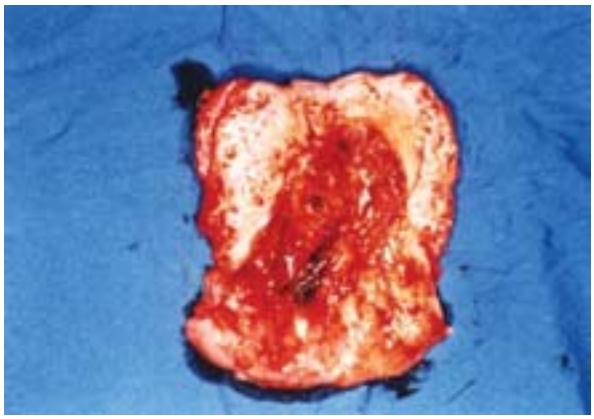

Fig 2. Pedicle originated from the fundal region of uterus

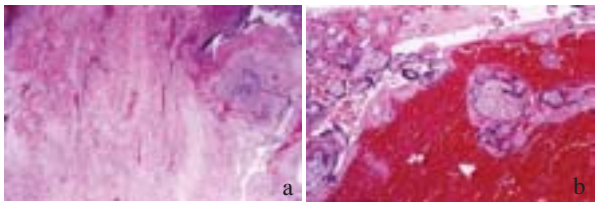

Fig 3. Microscopic findings at the pedicle (a) and the mass (b)

DISCUSSION

Placental polyp is generally regarded as rare; however, its incidence was estimated to be around 1 in 40,000-60,000 deliveries.[2] There are two types of placental polyp: acute type, which occurs within the first four weeks of the postpartum period, and chronic type, which is generally discovered months or years later.[2] Most cases of placental polyp belong to acute type; however, there are cases that were reported with history of 20 year postpartum,[1] five years postmenopause[3] and even without after last documented pregnancy.[1] In our case, the lesion presented ten years after the last pregnancy.

There are a number of unknown possibilities concerning the cause of a placental polyp. Two major theories have been proposed as its pathogenesis.[1,2] First, the cornual or fundal myometria are relatively thin and atonic, thus placenta attached to the area is relatively more difficult to remove. Second, placental polyps have their origin in partial or focal areas of placenta accreta, where the villi directly and firmly attach to the underlying myometrium as a result of the defective decidua, especially in the cornual area. Therefore, most placental polyps are situated in the cornu or fundus. In the present case, pedunculated pedicle originated from the fundus and microscopic findings showed trophoblastic villi invading into the myometrial base. However, the factors that cause these villi to survive still remain enigmatic.[1,2] Moreover, the survived villi are able to produce low levels of human chrorionic gonadotropin (hCG) as in our case and other reports.[2,4]

Clinical features associated with placental polyps include postpartum hemorrhages in acute type and chronic spotting or massive bleeding in chronic type.[1,2,4] The mass protruding from the external os founded in our case was an unusual finding.[4,5] The gross appearance and positive hCG should be differentiated from the more serious trophoblast-derived tumors such as choriocarcinoma1 and placental site trophoblastic tumor.[6] The low level of hCG as in this case was unusual for choriocarcinoma.[7] Various imaging techniques including ultrasonography with color Doppler signal,[8] power Doppler imaging,[9] and magnetic resonance imaging (MRI)[10] have been described, but none has ever made a preoperative diagnosis of placental polyp.[2] The definite diagnoses of previous reported cases were ascertained by tissue histopathology, obtained inadvertently after curettage or hysterectomy due to other diagnoses of bleeding.[1-5,8-10]

Although most chorionic villi were sclerotic and hyalinized, called ghost villi,[1,4] we could recognize viable-appearing trophoblast, possibly able to produce low hCG. The finding has been confirmed by the immunohistochemical demonstration of beta hCG within the syncytiontrophoblast.[4]

By nature, placental polyps contain abundant blood supply, more accurately detected by power Doppler imaging or MRI than by the conventional color Doppler signal.[9,10] These sophisticated tools may be useful for planning of further treatment. In the past, most cases -- including our case -- were treated with hysterectomy, usually performed because of intractable bleeding unresponsive to or exacerbated by dilatation and curettage.[1,2] Later therapeutic reports endeavored to preserve fertility such as conservative vaginal resection,[9] selective transarterial embolization before hysteroscopic removal,[11] and even methotrexate administration instead of surgery.[12]

CONCLUSION

Placental polyp, a rare and enigmatic disease, may be presented with various symptoms and signs, similar to other diseases. The more common and serious conditions should be explored. Tissue pathology should be obtained to ascertain the definite diagnosis. The optimal investigation and well-planned management are needed to alleviate morbidity and preserve fertility if desired.

REFERENCES

1. Swan RW, Woodruff JD. Retained products of conception, histologic viability of placental polyps. Obstet Gynecol 1969;34:506-14.
2. Dyer I, Bradburn DM. An inquiry into the etiology of placental polyps. Am J Obstet Gynecol 1971;109:858-67.
3. Baldwin WC. Placental polyps-an unusual cause of postmenopausal bleeding. Am J Obstet Gynecol 1956;71:1126-9.
4. Lawrence WD, Qureshi F, Bonakdar MI. Placental polyp: light micro scopic and immunohistochemical observations. Hum Pathol 1988;19:1467-70.
5. Hatada Y. An unexpected case of placental polyp with villi devoid of cytotrophoblastic cells. J Obstet Gynaecol 2004;24:193-4.
6. Soma H, Okada T, Yoshinari T, Furuno A, Yaguchi S, Tokoro K, et al. Placental site trophoblastic tumor of the uterine cervix occurring from undetermined antecedent pregnancy. J Obstet Gynaecol Res 2004;30: 113-6.
7. Soper JT, Lewis JL, Hammond CB. Gestational trophoblastic disease. In: Hoskins WJ, Perez CA, Young RC, eds. Principle and practice of gyneco logic oncology. 2nd ed. Philadelphia: Lippincott-Raven, 1997:1039-77.
8. Yi JG, Choi SE, Shin YK, Lee JH. Placental polyp: sonographic findings. AJR 1993;161:345-6.
9. Kanaoka Y, Maeda T, Nakai Y, Imanaka M, Ogita S. Placental polyp: power doppler imaging and conservative resection. Ultrasound Obstet Gynecol 1998;11:225-7.
10. Suzuki N, Suzuki M, Terada S, Inoue M. Placental polyp: MR imaging findings. AJR 1995;165:1554.
11. Takeuchi K, Ichimura H, Masuda Y, Yamada T, Nakago S, Maruo T. Selective transarterial embolization and hysteroscopic removal of a placental polyp with preservation of reproductive capacity. J Reprod Med 2002;47:608-10.
12. Yamamasu S, Nakai Y, Nishio J, Hyun Y, Honda KI, Ishiko O, et al. Conservative management of placental polyp with oral administration of methotrexate. Oncol Rep 2001;8:1031-3.

บทคัดย่อ

ก้อนเนื้อของรก: รายงานผู้ป่วย 1 ราย

วิเศรษฐ วัชโรทน พ.บ., ชัยรัตน์ ลีลาพัฒนดิษฐ์ พ.บ.

ภาควิชาสูติศาสตร์-นรีเวชวิทยา, คณะแพทยศาสตร์ศิริราชพยาบาล, มหาวิทยาลัยมหิดล, กทม. 10700 ประเทศไทย

ผู้ป่วยหญิงไทยหม้ายอายุ 28 ปี มีบุตร 1 คน อายุ 10 ปี มาโรงพยาบาลด้วยอาการเลือดออกมากทางช่องคลอด ตรวจภายในพบก้อนเนื้อที่ปากมดลูกมีลักษณะเป็นหย่อมเลือดออกและเนื้อตาย ผลตรวจการตั้งครรภ์ในปัสสาวะให้ผลบวกและในเลือดให้ผล beta-hCG ระดับต่ำ (53.6 mIU/ml) ผลการตรวจอัลตราซาวด์และ color Doppler พบก้อนลักษณะเข้มทึบและเลือดหล่อเลี้ยงน้อย ภายในคอมดลูก ระหว่างที่ทำการตัดชิ้นเนื้อเพื่อส่งตรวจมีเลือดออกมากไม่สามารถควบคุมได้จึงได้ทำการผ่าตัดมดลูกออกทางหน้าท้อง ผลการตรวจทางพยาธิเข้าได้กับก้อนเนื้อของรก