Case Report

Placenta Previa Percreta: A Case Report of Successful Management via Conservative Surgery

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Received 24 October 2012; Accepted 6 December 2012

Academic Editors: Y. Ezra, A. Kofinas, and M. G. Porpora

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Placenta percreta is one of the most serious complications of placenta previa and is frequently associated with severe obstetric hemorrhage usually necessitating hysterectomy. We present a case of placenta previa percreta diagnosed by ultrasound and magnetic resonance imaging techniques, in which we accomplished conservative management of postpartum hemorrhage. The management we propose includes the following steps: preventive catheterization of the descending aorta via transhumeral access; Stark cesarean delivery; uterotonic drugs; Affronti endouterine square hemostatic sutures; intrauterine application of Bakri balloon and partial filling with 100 mL of normal saline; B Lynch suture, hysterorrhaphy, and filling a Bakri balloon with up to 500 mL of normal saline; reversible radiological embolization; and/or surgical ligation of the uterine arteries. The bleeding stopped following placement of Affronti sutures combined with external (B-Lynch suture) and internal (Bakri balloon) uterine compression. Our experience indicates that this conservative method can be considered an option in the management of selected cases of pregnancy at high risk for intrapartum hemorrhage.

1. Introduction

Placenta accreta refers to a placenta that is abnormally adherent to the uterus [1]. There are three main entities (accreta, increta, and percreta), which are defined by histological degree of placental invasion into the myometrium [1]. Placenta accreta is one of the most serious complications of placenta previa and is frequently associated with severe obstetric hemorrhage, usually necessitating hysterectomy if medical therapies have failed.

We present a case of placenta previa percreta diagnosed by ultrasound and magnetic resonance images, in which we accomplished conservative management of *postpartum* hemorrhage.

2. Case Report

A 33-year-old woman (gravida 3, para 1) was referred to our hospital due to abnormal placentation diagnosed during a routine sonographic examination at 27 weeks of gestation. She had a history of prior cesarean section due to placenta

previa, five years earlier. On admission, the patient presented spotting without abdominal pain. An urgent abdominal ultrasound examination showed a viable fetus with appropriate biometrical parameters and normal amniotic fluid, while transvaginal Eco-Doppler images suggested the diagnosis of placenta previa accreta (Figure 1).

Careful evaluation of the placenta with pelvic non-contrast magnetic resonance imaging (MRI) confirmed the ultrasound diagnosis (Figure 1). The patient's urinalysis was negative for blood, and cystoscopy did not reveal bladder invasion. The patient was made aware of the potential obstetric complications. An elective cesarean delivery was planned at 35 weeks of gestation.

On the scheduled day of delivery, a preliminary prophylactic catheterization of the descending aorta by transhumeral access was performed. After opening the abdominal wall, intra-abdominal inspection showed the presence of multiple large vessels at level of the lower uterine segment, under the peritoneum and in the area of the bladder. An initial displacement of the bladder was performed and subsequently a transverse uterine incision was made above

(c)

3. Discussion

The first step of our conservative protocol is the preliminary prophylactic catheterization of the descending aorta by transhumeral or transfemoral access. Subsequently, several surgical treatments were combined. Initially endouterine square hemostatic Affronti's suture was applied to the area of bleeding at the site of the placental bed. The sutures are square

in shape measuring approximately 2 cm and penetrate from the endometrium to the myometrium without extending beyond the uterine serosa. Tying the two ends of the Affronti suture retracts the myometrial fibers and causes a reduction in bleeding [2].

Subsequently the “sandwich technique,” combined with endouterine Affronti’s sutures, induced a rapid hemostasis at the site of placental insertion.

In conclusion, our experience indicates that conservative methods can be considered as an option in the management of selected cases of pregnancy at high risk for intrapartum hemorrhage.

Conflict of Interests

The authors report no conflict of interests. The authors alone are responsible for the content and writing of the paper.

References

- [1] Y. Oyelese and J. C. Smulian, “Placenta previa, placenta accreta, and vasa previa,” *Obstetrics and Gynecology*, vol. 107, no. 4, pp. 927–941, 2006.
- [2] M. Arduini, G. Epicoco, G. Clerici, E. Bottaccioli, S. Arena, and G. Affronti, “B-Lynch suture, intrauterine balloon, and endouterine hemostatic suture for the management of postpartum hemorrhage due to placenta previa accreta,” *International Journal of Gynecology and Obstetrics*, vol. 108, no. 3, pp. 191–193, 2010.
- [3] C. B-Lynch, A. Coker, A. H. Lawal, J. Abu, and M. J. Cowen, “The B-Lynch surgical technique for the control of massive postpartum haemorrhage: an alternative to hysterectomy? Five cases reported,” *British Journal of Obstetrics and Gynaecology*, vol. 104, no. 3, pp. 372–375, 1997.
- [4] K. M. Flood, S. Said, M. Geary, M. Robson, C. Fitzpatrick, and F. D. Malone, “Changing trends in peripartum hysterectomy over the last 4 decades,” *American Journal of Obstetrics and Gynecology*, vol. 200, no. 6, pp. 632.e1–632.e6, 2009.
- [5] S. Wu, M. Kocherginsky, and J. U. Hibbard, “Abnormal placentation: twenty-year analysis,” *American Journal of Obstetrics and Gynecology*, vol. 192, no. 5, pp. 1458–1461, 2005.
- [6] W. C. Baughman, J. E. Corteville, and R. R. Shah, “Placenta accreta: spectrum of US and MR imaging findings,” *Radiographics*, vol. 28, no. 7, pp. 1905–1916, 2008.
- [7] B. K. Dwyer, V. Belogolovkin, L. Tran et al., “Prenatal diagnosis of placenta accreta: sonography or magnetic resonance imaging?” *Journal of Ultrasound in Medicine*, vol. 27, no. 9, pp. 1275–1281, 2008.
- [8] H. A. Mousa and Z. Alfirevic, “Major postpartum hemorrhage: survey of maternity units in the United Kingdom,” *Acta Obstetrica et Gynecologica Scandinavica*, vol. 81, no. 8, pp. 727–730, 2002.
- [9] R. G. Hayman, S. Arulkumaran, and P. J. Steer, “Uterine compression sutures: surgical management of postpartum hemorrhage,” *Obstetrics and Gynecology*, vol. 99, no. 3, pp. 502–506, 2002.
- [10] J. H. Cho, H. S. Jun, and C. N. Lee, “Hemostatic suturing technique for uterine bleeding during cesarean delivery,” *Obstetrics and Gynecology*, vol. 96, no. 1, pp. 129–131, 2000.
- [11] Y. Y. Cheng, J. I. Hwang, S. W. Hung et al., “Angiographic embolization for emergent and prophylactic management of obstetric hemorrhage: a four year experience,” *Journal of the Chinese Medical Association*, vol. 66, no. 12, pp. 727–734, 2003.
- [12] W. L. Nelson and J. M. O’Brien, “The uterine sandwich for persistent uterine atony: combining the B-Lynch compression suture and an intrauterine Bakri balloon,” *American Journal of Obstetrics and Gynecology*, vol. 196, no. 5, pp. e9–e10, 2007.