International Journal of Biomedical Research
ISSN: 0976-9633 (Online); 2455-0566 (Print)
Journal DOI: https://doi.org/10.7439/ijbr
CODEN: IJBRFA

Case Report

A case report on placenta previa percreta involving urinary bladder

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***Article History:**
Received: 21/02/2018
Revised: 28/02/2018
Accepted: 01/03/2018
DOI: https://doi.org/10.7439/ijbr.v9i2.4668

Abstract

Placenta previa percreta with urinary bladder invasion is a rare but a potentially lethal condition. It is one of the leading causes of intractable postpartum haemorrhage requiring obstetric hysterectomy. The incidence of placenta percreta has dramatically increased due to increase in caesarean section rate. It is associated with increased morbidity and mortality both in mother and fetus. Hence, we present a case report on placenta previa percreta involving bladder who underwent uterine artery embolisation followed by obstetric hysterectomy.

Keywords: Placenta previa percreta, placenta accrete, myomectomy,

1. Introduction

Placenta percreta is an abnormal penetration of placental tissue through the uterine wall with encroachment into surrounding organs such as bladder or rectum.10% of placenta previa cases are associated with placenta accreta. There is a well-known association between repeated caesarean sections, placenta percreta and abnormal placentation [1]. Other risk factors include previous uterine surgery such as myomectomy, dilation and curettage, and endometritis. Bladder invasion with placenta percreta is a rare occurrence, but can be lethal both for mother and foetus [2,3]. Placenta percreta is associated with high maternal morbidity and as much as 7 % maternal mortality. In literature, different management strategies have been mentioned, varying from conservative to radical approaches depending upon the extent of placental invasion, involvement of other organs, intraoperative haemorrhage and expertise of the surgeon [4].

2. Case Report

A 30 years old female G4P2L1NND1A1 was referred to our hospital at 29 weeks of gestation in view of abnormal placentation (placenta accreta) diagnosed during a routine sonographic examination at 28 weeks. Patient had a history of previous 2 cesarean sections, for placenta previa 7 yrs back followed by 2nd Lower segment Cesarian section (LSCS) for previous LSCS with postdatism 6 years back. She also had history of spontaneous abortion at 2 months of gestation for which evacuation of retained products was performed. On admission ultrasonography was done which showed a single live foetus with grade 4 placenta previa with placenta percreta infiltrating bladder dome for a length of 6.3cm (Figure 1). MRI pelvis was done which confirmed the findings of complete placenta previa and placenta percreta along the left anterolateral aspect of uterine wall with infiltration into the dome of urinary bladder for a length of 5 cm transversely and about 3 cm craniocaudally. Patient was kept in the hospital till 35 weeks of gestation. Ultrasonography was done regularly for interval growth of the foetus. Surgery was planned in collaboration with a multidisciplinary team including interventional radiologist, anaesthetist, and urologist at 35 weeks of gestation. On the scheduled day of surgery bilateral internal iliac artery

catheterisation was done before the surgery. Cesarean section was performed under general anesthesia. Male baby of 2.1kg with Apgar score of 9 was delivered by taking incision on the upper segment. Attempts were made to separate placenta but placenta was adherent. So placenta was left in situ cutting the umbilical cord. Bladder was adherent to left anterolateral aspect of the uterus. Attempts to separate bladder from the uterine surface resulted in severe bleeding from the uterine surface and the bladder surface. Hence decision of obstetric hysterectomy was taken. Balloon in the internal iliac artery was inflated which reduced the blood loss and obstetric hysterectomy was done in stepwise manner. Since bladder was adherent it was separated with sharp and blunt dissection. Because of invasion of placenta into the bladder, while separating bladder from uterine surface a large defect of size 3*4cm was observed on the base of the bladder. Bladder was repaired in two layers by the uro-surgeons and suprapubic catheter was placed. Abdominal drain was kept and abdomen was closed in layers. Estimated blood loss was 1500ml. Intra-operative3 pint PRC's and 2 FFP's were given. Balloon in the internal iliac artery were deflated after 48 hours. Postoperatively recovery was uneventful. Suprapubic catheter was removed on postop day 21. Per urethral catheter was removed on day 24 after bladder training. Patient went discharged with intact bladder functions. The pathology report showed chorionic villi invading the myometrium all the way through serosa consistent with the diagnosis of a placenta percreta and the bladder tissue which was excised also showed presence of chorionic villi.

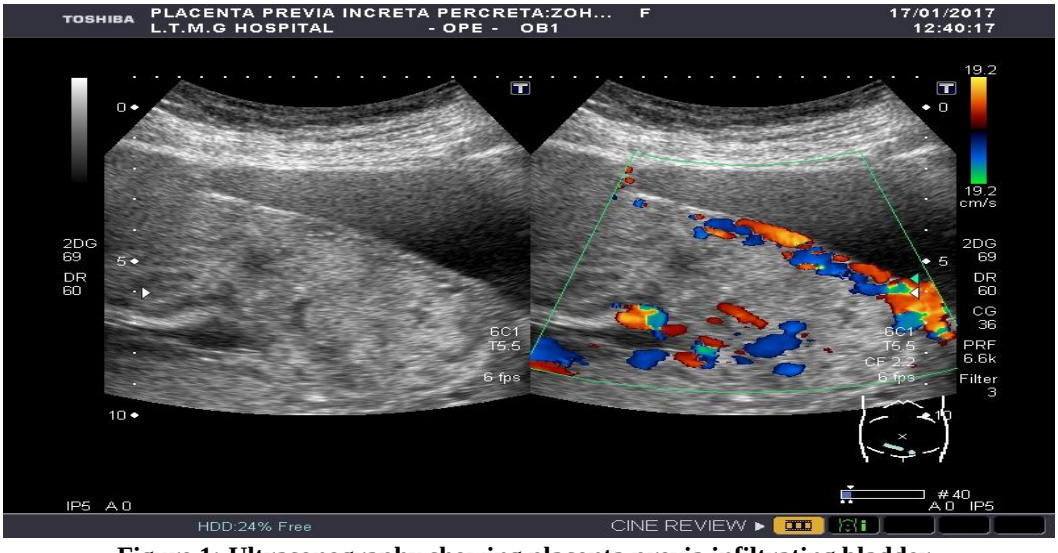

Figure 1: Ultrasonography showing placenta previa infiltrating bladder

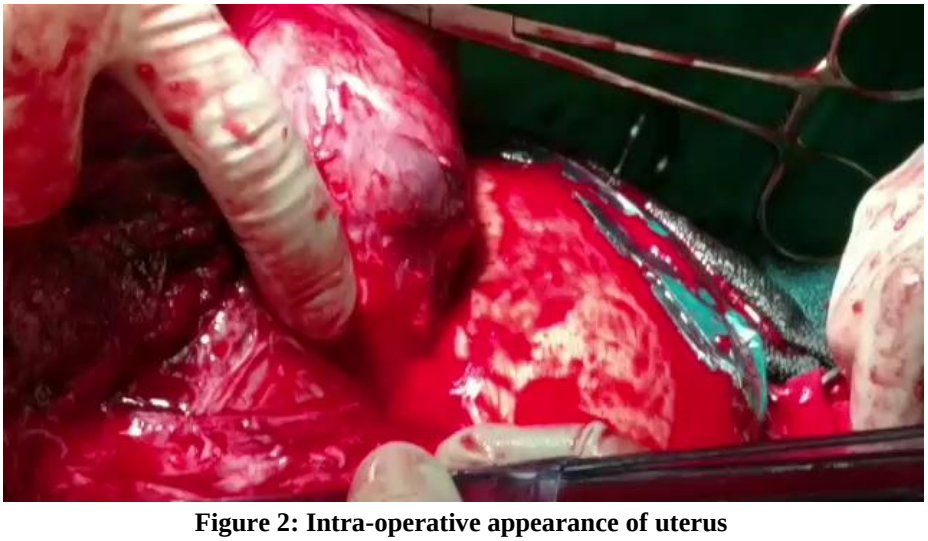

Figure 2: Intra-operative appearance of uterus

3. Discussion

Placenta accreta and its variants are classified by the extent of myometrial villus infiltration. Placenta accreta is characterized by chorionic villi on the myometrial surface, increta by villi extending into the myometrium, and percreta by infiltration through the myometrium to breach the serosal surface and possibly beyond. The exact etiology being unknown, it has been postulated that in placenta

accreta the barrier function of decidua is absent and, therefore, invasive trophoblastic epithelium invades the myometrium [5]. Very few cases of placenta percreta with bladder involvement have been reported. About 75% of placenta accreta cases are associated with placenta previa, the incidence of which increases from 0.65% after one caesarean section to 10% after four or more [6]. Although rare, placenta percreta with bladder involvement is potentially catastrophic disease, with a reported maternal mortality of 20% and a perinatal mortality of 30%. In view of the morbidity and mortality, associated with the condition, attempts ought to be made at identifying risk factors and reaching an antenatal diagnosis. The primary screening tool for at-risk patients should be realtime ultrasonography, preferably using the transvaginal approach [7]. Ultrasound findings suggestive of placental invasion are: (a) obliteration of the retroplacental hypoechoic zone; (b) presence of multiple irregular vascular spaces within the placenta (vascular lacunae); and (c) disruption of the hyperechoic boundary between the uterine serosa and posterior bladder wall. The presence of placental lacunae has the highest sensitivity for detection of placenta accreta (78.6%) followed by obliteration of retroplacental zone (57%) [8]. Other modalities such as Doppler sonography and Magnetic Resonance Imaging may be useful adjuncts in diagnosis.

There can be two approaches while managing a case of placenta percreta with urinary bladder involvement [9] first, while doing caesarean section if bleeding is not significant caesarean incision to be closed with entire placenta left in situ without any attempts to remove the placenta. In such scenarios Methotrexate can be given postoperative [10,11]. In few cases placenta will spontaneously resorbed. In patients whom, placenta is left intact after caesarean section are followed up by sonography for placenta absorption. However if patients develop significant bleeding few days after caesarean section, even after giving methotrexate, hysterectomy can be done. Second is opting for obstetric hysterectomy if torrential bleeding is present along with internal iliac artery catheterisation if possible for temporarily occlusion of blood supply [12,13]. Leaving placenta in-situ may prevent massive haemorrhage and preserve fertility.

4. Conclusion

Multidisciplinary management (obstetrics, surgery, interventional radiology, anaesthesia, etc.) in a referral centre is indispensable for a favourable outcome. In our case successful management was possible because of proper preoperative arrangement and management by expert multidisciplinary team.

References

[1]. Clark SL, Koonings RP, Phelan JP. Placenta praevia accrete and prior cesarean section. *Obstet Gynecol* 1985; 66:89-92.

[2]. Capella-Allouc S, Morsad F, Rongières-Bertrand C, Taylor S, Fernandez H. Hysteroscopic treatment of severe Asherman's syndrome and subsequent fertility. *Hum Reprod* 1999; 14:1230–3.

[3]. Usta IM Hobeika EM, Musa AA *et al*. Placenta previaaccreta: risk factors and complications. *Am J Obstet Gynecol* 2005; 193:1045-9.

[4]. Johnston TA, Paterson-Brown S. Placenta praevia, placenta praevia accreta and vasa praevia: diagnosis and management. London: Royal College of Obstetricians and Gynaecologists. Green-top Guideline No 27; 2011 [updated May 1, 2011].

[5]. Descargues G, Clavier E, Lumercier E *et al*. Placenta percreta with bladder invasion managed by arterial embolization and manual removal after cesarean. *Obstet Gynecol* 2000; 96:840.

[6]. Price FV, Resnik E, Heller KA *et al*. Placenta previa percreta involving the urinary bladder: a report of two cases and review of the literature. *Obstet Gynecol* 1991; 78:508-11.

[7]. Pelosi MA III, Pelosi MA. Modified cesarean hysterectomy for placenta previa percreta with bladder invasion: retrovesical lower uterine segment bypass. *Obstet Gynecol* 1999; 93(5 Pt 2):830-3.

[8]. Crespo R, Lapresta M, Madani B. Conservative treatment of placenta increta with methotrexate. *Int J Gynaecol Obstet* 2005; 91:162-3.93:830-3.

[9]. Karam AK, Bristow RE, Bienstock J, *et al*. Argon beam coagula- tion facilitates management of placenta percreta with bladder invasion. *Obstet Gynecol* 2003; 102:555-556.

[10]. Hays AME, Worley KC, Roberts SR. Conservative management of placenta percreta. Experience in two cases. *Obstet Gynecol* 2008; 112(2 pt 2):425-426.

[11]. Henrich W, Fuchs I, Ehrenstein T, *et al*. Antenatal diagnosis of placenta percreta with planned in situ retention and methotrexate therapy in a woman infected with HIV. *Ultrasound Obstet Gynecol* 2002; 20(1):90-93.

[12]. Lee PS, Bakelaar R, Fitpatrick CB, *et al*. Medical and surgical treatment of placenta percreta to optimize bladder preservation. *Obstet Gynecol* 2008; 112(2 pt 2): 421-424.

[13]. Liang HS, Jeng CJ, Sheen TC, *et al*. First-trimester uterine rupture from a placenta percreta. *J Reprod Med* 2003; 48(6):474-478.