Bladder invasion in placenta praevia percreta: a multidisciplinary approach.

L. M.C.L. Fossion, P. Jichlinski*, H.-J. Leisinger*

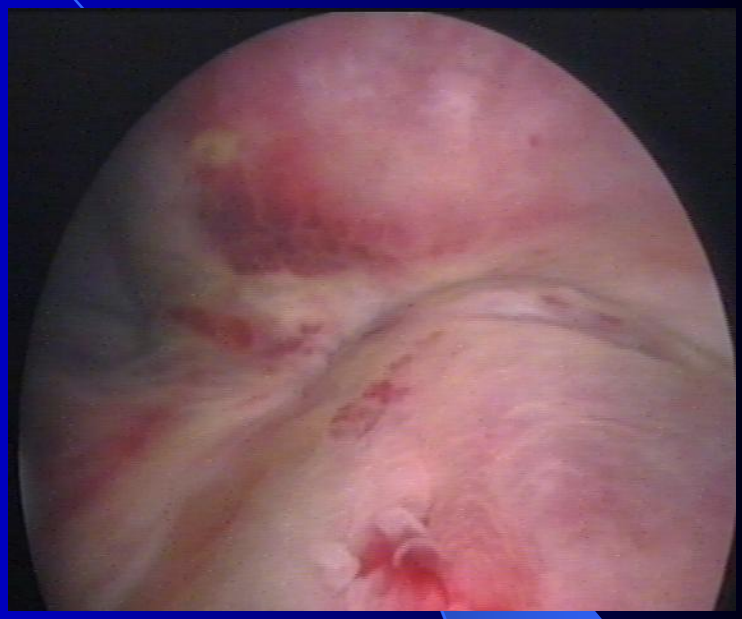
Department of Urology, UMC St.-Radboud, Nijmegen, the Netherlands

* Department of Urology, CHUV, Lausanne, Switzerland

Case:

A 29-year old woman develops a hypovolemic shock postpartum. A prompt hysterectomy is done with hemostatic intention for a placenta praevia. Postoperatively the patient stays anaemic despite multiple transfusions. An ultrasound shows a mass in the bladderwall. Because the patient has macroscopic haematuria a cystoscopy is performed. A giant extrinsic mass is visible; we conclude a placenta praevia a-percreta with bladder invasion. Conservative treatment with methotrexate is successful.

The possibility of placenta percreta with bladder invasion should be considered in all pregnant women having hematuria, lower abdominal pain, lower urinary tract symptoms or painful ante-or prepartum hemorrhage with shock. Cystoscopy can be a useful diagnostic tool additional to the findings on ultrasound or magnetic resonance imaging. It also permits ureteral stenting which is helpful for intraoperative identification and can prevent ureteral injury.



Cystoscopic image: posterior wall abnormality in placenta percreta with bladder wall invasion.

Definition:

Placenta percreta is an abnormal invasion and penetration of trophoblastic tissue into the myometrium, possibly involving adjacent structures(bladder), due to a partial or total absence of the decidua basalis or imperfect development of the Nitabuch layer.

Prevalence: placenta percreta with bladder invasion in 1/12500 of the births.

Risk factors:

Multigravida(66%), previous cesarean section(94%), uterine curettage, placenta praevia, endometriosis. Down's syndrome.

Presentation: painful vaginal bleeding(48%), hematuria(31%), lower urinary tract symptoms, abdominal pain, hemorrhagic shock, premature onset of labor, massive hemoperitoneum …

Diagnostic tools:

- Cystosocpy: intact mucosal layer, pulsating submucosal placental vessels, localized posterior wall abnormality, mucosal ulceration, necrosis and active bleeding. Cystoscopic clot evacuation, fulguration or biopsies result in uncontrollable hemorrhage and emergency hysterectomy. Ureteral stenting during the cystoscopy may aid in intraoperative identification and prevent ureteral injury.
- Ultrasound + Doppler establish a diagnose in 35%.
- MRI.

Maternal mortality in 6-10% and fetal mortality in 19%.

Urologic complications after surgical treatment:

§ Bladder laceration	26%
§ Gross hematuria	9%
§ UTI	9%
§ Vesicovaginal fistula	9%
§ Ureteral transection	6%

Conclusion:

Placenta percreta with bladder invasion is a potentially life threatening complication of pregnancy.

The possibility of placenta percreta with bladder invasion should be considered in all pregnant women having hematuria, lower abdominal pain, lower urinary tract symptoms or painful ante- or prepartum hemorrhage with shock.

Cystoscopy can confirm bladder invasion in placenta percreta and permits ureteral stenting to aid in intraoperative identification and to prevent ureteral injury. The risk of ureteral injury is especially increased during ligation of the uterine vessels and transection of the cardinal ligaments performing a peripartal hysterectomy, necessary in 1/1900 cases of placenta percreta.

A multidisciplinary approach and familiarity of both gynaecologists and urologists with this condition is crucial for effective management.