

An Interesting case of Urinoma following Triple-P procedure for Placenta Percreta

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Abstract

Title- An interesting case of urinoma following Triple-P procedure for placenta percreta.

Objective- This case is presented to increase awareness amongst clinicians to suspect, diagnose and treat urinomas following complex caesarean sections to reduce maternal morbidity.

Case Report- This is a case of 32-years old female G9P3. Late booker at 23 weeks at St Georges hospital. She had 3 previous caesarean sections with gestational diabetes and macrosomic babies. Her first ultrasound scan at 23 weeks revealed an anterior low-lying placenta with normal fetal growth and increased uterine artery PI. She presented at 29 weeks with reduced fetal movements. Ultrasound scan confirmed intrauterine demise and a suspected placenta accrete. Triple-P procedure was arranged with the multidisciplinary team. Intraoperatively, placenta was seen invading lower uterine segment with neovascularisation on the surface of bladder. Operation deemed unremarkable and blood loss was 2600ml. Patient made satisfactory recovery and was discharged on day 7. She presented on day 11 via ambulance with increasing abdominal pain. She was tachycardic and pyrexial with guarding, a distended abdomen and no bowel sounds. Initial differential diagnosis were bowel obstruction, large bowel perforation and collection. Her CT scan revealed a large volume intra peritoneal collection. She was managed conservatively with antibiotics.

She remained pyrexial, a subsequent cystogram confirmed a bladder leak. She deteriorated further with worsening inflammatory markers. She underwent a cystoscopy, bilateral retrograde ureterography, laparotomy and repair of bladder injury. At cystoscopy, urinary bladder was puckered superiorly with small hole at the dome with surrounding erythema. Stitch passing from uterus to urothelium was removed. Ureterography revealed no leak in ureters. Bladder was repaired in 2 layers. Patient was given antibiotics and was catheterised for 2 weeks. She was discharged after 10 days with antibiotics for surgical site infections. Repeat cystogram 2 weeks postoperatively revealed no urinary leak and the catheter was removed. This patient had a prolong recovery period. Her care is shared by urology and obstetric team and her progress is being followed up closely.

Discussion- Urinomas may be occult initially and may be diagnosed late leading to complications such as abscess formation and electrolyte imbalances, if not promptly diagnosed and appropriately managed. High degree of suspicion and involvement of multidisciplinary team is vital in reducing morbidity. Conclusions- Urinary tract injuries occur in approximately 2% cases undergoing Triple-P procedure. They are associated with greater blood loss, need for blood transfusion, longer hospital stay and additional surgeries.

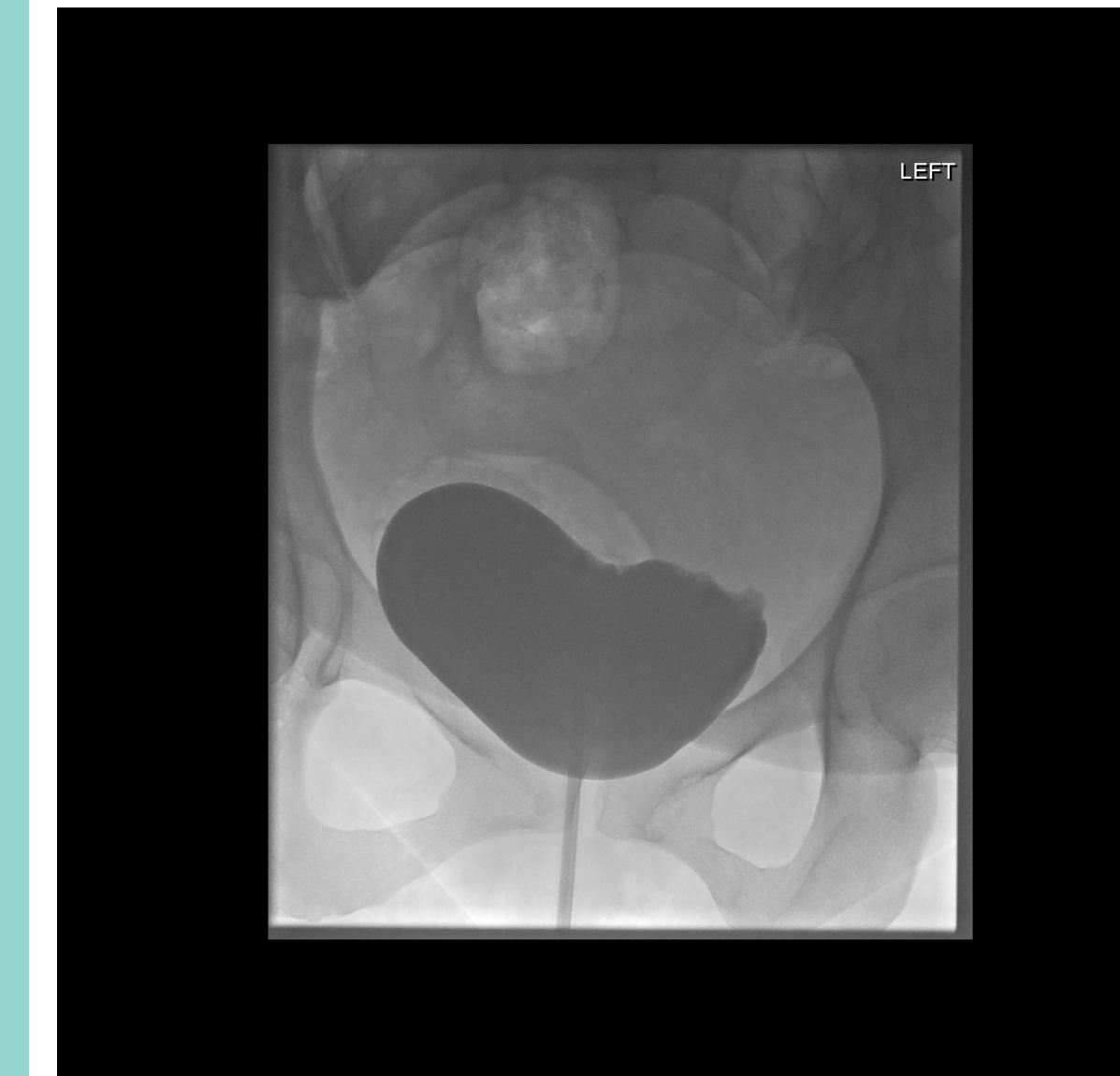
Introduction

- Urinomas may be occult initially diagnosed late leading to complications such as abscess formation and electrolyte imbalances, if not promptly diagnosed and appropriately managed. High degree of suspicion and involvement of multidisciplinary team is vital in reducing morbidity specially after a Triple P procedure.
- The Triple P procedure involves perioperative placental localization and delivery of fetus via a transverse uterine incision above the upper border of the placenta, pelvic devascularisation and placental non separation with myometrial excision and reconstruction of uterine wall. It has been described as a safe alternative to peripartum hysterectomy or intentional retention of the placenta.
- Radiologists play a key role in diagnosing urine leaks and determining their cause and extent. Contrast material–enhanced computed tomography (CT) with delayed imaging, CT cystography, and retrograde urethrography are the diagnostic imaging of choice.

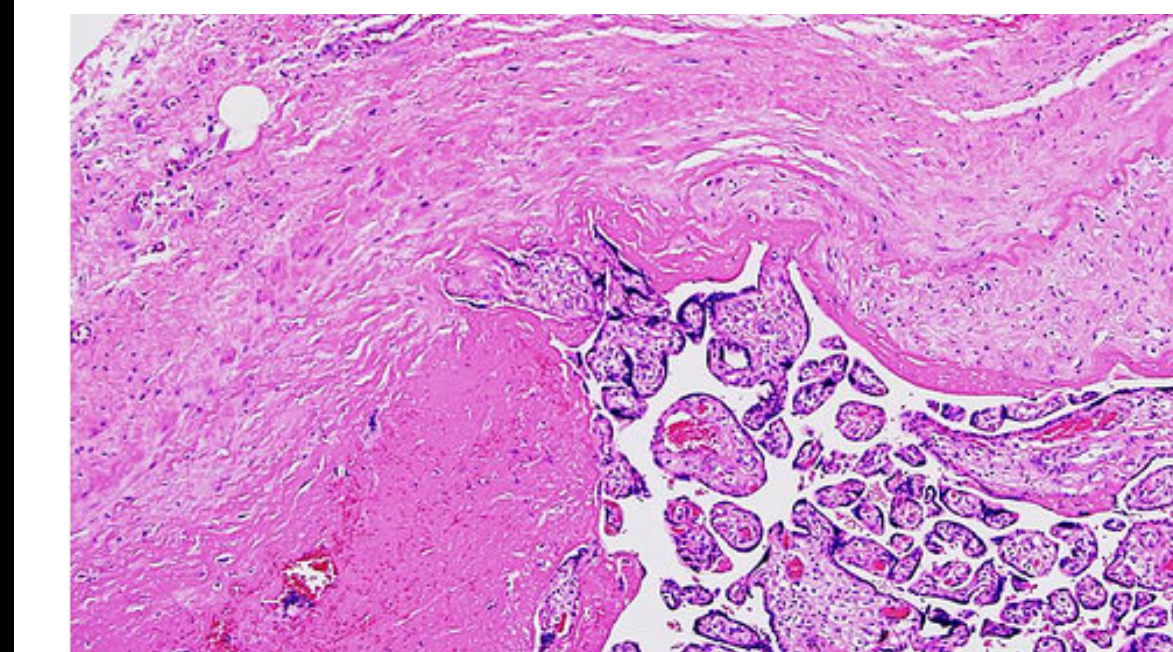
The Case

- This is a case of 32-years old female G9P3. Late booker at 23 weeks at St Georges hospital. She had 3 previous caesarean sections with gestational diabetes and macrosomic babies. Her first ultrasound scan at 23 weeks revealed an anterior low-lying placenta with normal fetal growth and increased uterine artery PI.
- She presented at 29 weeks with reduced fetal movements. Ultrasound scan confirmed intrauterine demise and a suspected placenta accreta. Triple-P procedure was arranged with the multidisciplinary team. Intraoperatively, placenta was seen invading lower uterine segment with neovascularisation on the surface of bladder. Operation deemed unremarkable and blood loss was 2600ml.
- Patient made satisfactory recovery and was discharged on day 7. She presented on day 11 via ambulance with increasing abdominal pain. She was tachycardic and pyrexial with guarding, a distended abdomen and no bowel sounds. Initial differential diagnosis were bowel obstruction, large bowel perforation and collection. Her CT scan revealed a large volume intra peritoneal collection. She was managed conservatively with antibiotics.
- She remained pyrexial, a subsequent cystogram confirmed a bladder leak. She deteriorated further with worsening inflammatory markers. She underwent a cystoscopy, bilateral retrograde ureterography, laparotomy and repair of bladder injury. At cystoscopy, urinary bladder was puckered superiorly with small hole at the dome with surrounding erythema. Stitch passing from uterus to urothelium was removed. Ureterography revealed no leak in ureters. Bladder was repaired in 2 layers. Patient was given antibiotics and was catheterised for 2 weeks. She was discharged after 10 days with antibiotics for surgical site infections.
- Repeat cystogram 2 weeks postoperatively revealed no urinary leak and the catheter was removed. This patient had a prolong recovery period. Her care is shared by urology and obstetric team and her progress is being followed up closely.

Investigations



CT abdo-pelvis with contrast
A moderate amount of simple appearing free fluid with no evidence of air is seen on CT scan.



Histopathology showing
placenta accrete with invasion of uterine wall by placental vessels.

Discussion

- Urinomas should be suspected, diagnosed and treated early following complex caesarean sections to reduce maternal morbidity.
- Multidisciplinary team approach with early involvement of radiologists in suspected urine leaks help in determining their cause and extent. Contrast material–enhanced computed tomography (CT) with delayed imaging, CT cystography, and retrograde urethrography are the diagnostic imaging studies of choice.
- Raising awareness amongst clinicians caring for these complex patients will help in early detection and appropriate management and would in turn reduce patient morbidity.

References

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