

Vesicouterine fistula following a caesarean section: Report of a case with review of literature

Prakasa RB¹, Rambabu B², Sridhar P³

^{1,2,3}(Department of Urology, Government General Hospital, Guntur Medical College, Guntur, Andhra Pradesh, India)

Abstract : Vesicouterine fistula is the least common of the fistulae involving genitourinary tract. Most common cause being iatrogenic secondary to injury during gynaecologic surgeries like caesarean section, various other causes have been documented. Though rarely reported in the literature previously there has been an increase in the incidence recently secondary to increasing number of caesarean sections. Presentation may be early or delayed and there is still controversy regarding the ideal time of repair. Here we report a case of vesicouterine fistula presenting in the immediate postoperative period following a caesarean section which was managed by an early surgical repair.

Keywords: vesicouterine fistula, caesarean section, genito-urinary fistulae, surgical repair, youseff syndrome

I. Introduction

Vesicouterine fistula is an abnormal communication between urinary bladder and uterus. It accounts for less than 4% of cases of urogenital fistulae. Only 100 cases have been reported in the literature till 1980s. Iatrogenic injury during caesarean section is the most common cause. There has been an increasing incidence recently secondary to more number of surgical deliveries. We report a case of vesicouterine fistula following a caesarean section which was managed by an immediate surgical repair.

II. Case History

A 25 year old female who underwent a lower segment caesarean section presented in the immediate postoperative period with history of haematuria through the perurethraly placed foleys catheter. There was history of lower abdominal pain. The hematuria subsided spontaneously and recurred after one week. An ultrasound of the abdomen revealed hydroureteronephrosis on right side. Renal function test was normal. A CECT of the abdomen revealed a fistulous communication between posterior wall of bladder and lower segment of uterus (Fig.1, 2,). In addition there was dilatation of pelvicalyceal system and ureter on right side. Cystoscopy revealed a defect in the posterior wall of bladder near dome of 3x3 cm which was communicating with the uterus (Fig.3). A retrograde pyelogram was done which showed a dilated ureter and pelvicalyceal system above the level of pelvic brim most likely a physiologic hydroureteronephrosis. The patient was taken up for the repair of fistula. Intraoperatively 3x3 cm defect was found in the posterior wall of bladder communicating with the lower segment of uterus. The bladder was separated from the uterus and the uterine defect was closed. Bladder was repaired in two layers and an omental interposition was done between the uterus and bladder. Postoperative recovery was uneventful and a cystogram postoperatively revealed a good bladder capacity with no evidence of any leak.

III. Discussion

Vesicouterine fistulae are rare representing 1-4% of all gynaecologic fistulas [1]. Most commonly secondary to iatrogenic injury during caesarean section [2] which constitutes nearly 80% of the cases, other causes include post radiation necrosis, malignancy, genitourinary tuberculosis, inflammatory bowel disease and congenital abnormalities of the genitourinary tract [3]. There has been an increase in the number of cases reported recently secondary to an increasing number of caesarean sections performed.

Clinical presentation may vary depending on the timing of presentation. Patients may present early in the immediate postoperative period like in our case with hematuria, abdominal pain, fever or dysuria. Delayed presentation may occur in some cases who present with the classical description of Youssef syndrome – menouria, cyclic hematuria, infertility and urinary continence [4]. Diagnosis of the condition requires a high index of suspicion and radiological investigations including an ultrasound, CECT or cystogram. Cystoscopic evaluation may be useful to visualise the site and size of fistula and feasibility of surgical repair.

Management options include conservative methods which have high failure rate though can be attempted for small fistula which are diagnosed early [3]. Continuous bladder catheterisation with antibiotics for 3 weeks has been recommended in these cases. Hormonal treatment with oral contraceptive pills and luteinising hormone analogues has been tried in some early diagnosed fistulae with limited success rate [5].

Surgical treatment is the mainstay of therapy especially for large fistulae which are unlikely to close spontaneously. There is still no consensus on the timing of surgery though both early and delayed approaches have been tried with good success rates. If the fistula is large and patient is symptomatic early intervention is likely to benefit the patient with earlier recovery and improved quality of life. Delayed surgery has the advantage of allowing the inflammatory response to subside and improved surgical outcomes [6].

IV. Conclusion

Vesicouterine fistula though considered a rare disease in the past has been increasing in recent times secondary to the increased number of caesarean sections being performed. Careful dissection of the bladder away from the uterus during repeat caesarean sections and adequate bladder decompression in the intraoperative and postoperative period can be useful. There is increasing trend for early surgical repair to minimise the morbidity and its effect on quality of life.

References

- [1] Porcaro AB et al. Vesicouterine fistulas following cesarean section: report on a case, review and update of the literature. *Int Urol Nephrol.* 2002;34:335–44.
- [2] Jozwik M, Jozwik M, Lotocki W. Vesicouterine fistula—an analysis of 24 cases from Poland. *Int J Gynaecol Obstet.* 1998;57:169–72.
- [3] DiMarco CS et al. Vesicouterine fistula: a review of eight cases. *Int Urogynecol J Pelvic Floor Dysfunct.* 2006;17:395–9.
- [4] Sefrioui O et al. Vesico-uterine fistula of obstetrical origin. Report of 3 cases [article in French] *Ann Urol (Paris)* 2002; 36:376–80.
- [5] Hadzi-Djokic JB, Pejicic TP, Colovic VC. Vesico-uterine fistula: report of 14 cases. *BJU Int.*2007; 100:1361–3.
- [6] Al Nuaim LA, Kattan S, Mustafa MS. Vesicouterine fistula after a previous low vertical cesarean section (DeLee incision) *Int J Gynaecol Obstet.* 1996;55:161–2

Figures



Figure 1 : CT image of vesicouterine fistula



Figure 2 : CT image (Sagittal plane)



Figure 3: Cystoscopic image of the fistula between uterus and bladder

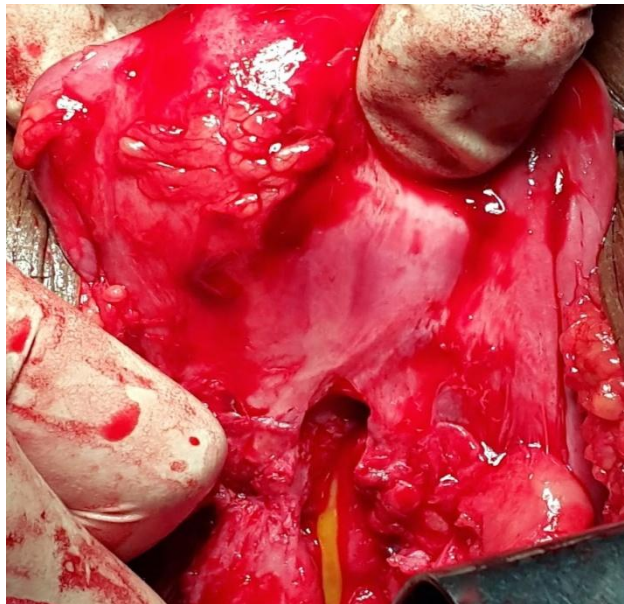


Figure 4 : Intraop image of the fistula