

A rare case of transvesical lower segment caesarean section

Abstract

Caesarean section is a surgical procedure which involves an incision made through woman's abdomen and uterus to deliver babies. This can be done as either elective or emergency procedure. According to technique concerned, they can be either done by classical or lower uterine segment approach. Transvesical caesarean is a rare entity and not a routinely practiced technique is used for delivery in women born with imperforate anus, ectopic intravaginal urethra, vaginal and urethral strictures, and bladder adherent completely over the uterus. There is paucity of literature with transvesical caesarean section.. The gravid uterus extends well cephalad to the urinary bladder. Since such cases are very rare, we are reporting a case of transvesical caesarean section.

Keywords: caesarean section, transvesical, caesarean section

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Abbreviations: IVF, *In vitro* fertilisation; LMP, last menstrual period; IUGR, intra uterine growth restricted; ATT, anti-tuberculosis therapy

Case report

Our patient, aged 35year female, a Primigravida, had conceived after In Vitro Fertilisation (IVF) conception. She presented to us at 33+5weeks as an emergency with Diamniotic dichorionic twin gestation. Her LMP was on 10.08.2015, and her EDD was on 17.05.2016. She had hypothyroidism, along with oligohydramnios with the baby being Intra Uterine Growth Restricted (IUGR) & Fetal Doppler changes. In addition, she has had vesicocolic fistula excision in the past with exploratory laparotomy and also had ileostomy closure. In addition to all these, she had Koch's treatment and she was posted for Elective LSCS because of foetal risk factors as outlined below.

She had genital TB diagnosed on 21.05.2015 by Quantiferon was on anti-tuberculosis therapy (ATT) during pregnancy and stopped at 28thweek of pregnancy. She also had h/o Urinary Tract Infection (UTI) at 15years of age for 4months for which she was treated symptomatically. Her past history included passing stool particles in urine and passing urine through anus following UTI for which she was diagnosed to have Vesicocolic fistula with left ovarian dermoid cyst.

Her previous surgical history was as follows

A. Cystoscopy + Laparoscopic vesicocolic fistula division+Laparoscopic partial cystectomy+Sigmoid repair + Bladder repair was done on 13.03.2012 for vesicocolic fistula. She was stable for 10days with catheter *In situ*, then complained of pain abdomen/ vomiting/loose stools on day 10 of post-operative period on 22.03.2012. Contrast CT had showed leak from rectosigmoid junction and was diagnosed as Sigmoid colon fistula + pyoperitoneum + peritonitis.

B. Exploratory laparotomy+closure of sigmoid colon fistula+diverting loop ileostomy on 25.03.2012. Patient was stable postoperatively with Foley's catheter *In situ* for 13days. Intra-op findings: Pus in the peritoneal cavity, dense adhesions between bladder/ anterior abdominal wall/ uterus and sigmoid colon, leak at the previously sutured sigmoid colon, dense flakes in the peritoneal cavity. On 25.05.2012 CT cystogram revealed – No evidence of colo-vesical fistula.

C. Ileostomy closure (end to end anastomosis) on 06.06.2012. Post operative was uneventful. Her vitals and systemic examination was normal. Routine investigations were done. The USG report showed DADC twins (33+2 by LMP).

Fetus A: 32+2weeks, cephalic presentation, liquor normal, EFW 1771grams, FHR+147bpm, umbilical artery showed increased PI.

Fetus B: 29+2weeks, breech presentation, liquor less, EFW 1199gms, single Pocket - 1cm, FHR+ .Doppler reverse diastolic flow + in umbilical artery with increased diastolic flow in cerebral artery/ CPR ratio<1 - Fetus at risk for hypoxia.

Hence she underwent Elective LSCS + Bladder repair on 02.04.2016. Pfannenstiel incision was taken. Abdomen opened without proper demarcation of various layers through transvesical approach. Transverse incision on visible part of lower segment. First twin: a live female baby delivered by vertex at 11.10am of weight 1.84kgs, thick cord +. Second twin: a live male baby was extracted by breech at 11.11am of weight 1.24kgs, liquor clear and scanty, thin cord +. Placenta with membranes expelled completely. Uterine incision sutured in single layer with No.1 chromic catgut. Bladder had advanced upto fundus. Both ureteric orifices identified by continuous spurt of urine. Posterior wall of bladder closed in single layer (continuous locking) using vicryl 2-0. Anterior wall of bladder closed in three layers using vicryl 2-0 (first layer – continuous locking, second layer - continuous running, third layer – intermittent). Bladder integrity was good, bladder filling present and no obvious leakage

visualized. Abdomen was closed in layers. Clear urine drained at the end of procedure - Foley's *In situ*. Patient was discharged after 2 days with catheter *In situ*.

Discussion

Transvesical Caesarean section is not a surgery that is undertaken routinely, but in complicated cases like ours, it is probably a good choice. A report of a caesarean by transvesical incision and corporal opening of the uterine cavity on a primipara with relative disproportion who had an antefixation operation with fixation of the bladder's peritoneum above the uterine fundus to the back side of the uterus in 1973 was one of the first reports in literature we could find¹ Another clinical case in 1989, the authors have reported the technique of transvesical incision for caesarean section, which, has limited and special indications.²

In the third case we found in the literature in 1992, transvesical caesarean section was done for delivery in a woman born with an imperforate anus, ectopic intravaginal urethra, and vaginal and urethral strictures. She had undergone multiple reconstructive procedures that had left her bladder completely covering the anterior uterine surface. The rest of the uterus, including the fundus and the broad ligaments, were obscured by multiple bowel adhesions. Caesarean section was necessary because of pelvic bone and soft-tissue deformity. Anterior and posterior vertical cystotomies resulted in exposure of the anterior uterine wall, and the baby was delivered through a vertical uterine incision. The woman recovered and 6 months later had no genitourinary complaints.³ Other than the above three reports, we could not find any literature in any of the publications. This unusual rarity made us to report our case of transvesical lower segment caesarean section.

From our case report, we learn that, we have to be aware that bladder can be advanced even upto the fundus of a full term uterus when adhesions exist. The only other cases in the literature were found in 1972,¹ 1989² and 1992.³ One had an antefixation operation. Another case had undergone reconstructive procedures for imperforate anus, ectopic intravaginal urethra, and vaginal and urethral strictures. Tae

hee kim⁴ in his study has used 'interceed' to prevent vesicouterine adhesions. His aim was to evaluate the efficacy of an adhesion barrier (interceed) for preventing vesico-uterine fold adhesion in women undergoing primary caesarean section. The vesico-uterine adhesion was scaled from 0 to 3. Grade 0 had no adhesion, grade 1 had some adhesion but with normal myometrial width enabling further pregnancy and grade 2 had some adhesion and thin myometrium hindering further pregnancy. Grade 3 had severe vesico-uterine adhesion and peritoneal adhesion which disturbed facile fetal delivery. Forty-five patients were enrolled in his study. All eight patients in the Interceed group had grade 0 adhesion. Of 37 patients in the non-Interceed group, 30 patients had grade 1 adhesion, 4 patients had grade 2, and 3 patients had grade 3. He concluded that Interceed placement reduced caesarean scar adhesion.⁵ Our case had many comorbidities and complex history, unusual course and multiple surgeries. This makes it a very rare case and such a case may not be encountered by many.

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Conflict of interest

Author declares that there is no conflict of interest.

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