Ureteral injury in an incidental vaginal incision during cesarean section

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Abstract

Incidental vaginotomy, a potentially severe complication, has occasionally been reported in cesarean sections performed after prolonged second stage labor. There is controversy on the significance of vaginotomy and its consequences in cesarean section. Ureteral injury has been reported as a possible complication of cesarean section. Herein, we present a case of anterior vaginal incision instead of lower uterine segment, where the right ureter had been obstructed by sutures. The injury was detected and corrected during the operation. Thus incidental vaginotomy in cesarean section must be taken seriously and avoided as far as possible. It is also crucial to inspect and preserve the integrity of ureters in such cases.

Keywords: Cesarean; Vaginotomy; Ureter

Introduction

Delivery by trans-abdominal and anterior vaginal wall incision (laparotomy) in cases of second stage labor arrest was practiced in the 19th and 20th centuries. Later studies proved that this technique was not recommendable and the practice abandoned.

In spite of that, incidental vaginal incision instead of the common incision of the lower uterine segment is associated with some cesarean sections. Among 10128 cases of cesarean sections in Shohada Hospital over a period of 20 years, we had only one case of vaginotomy and that single case resulted in ureteral obstruction.

Case report

A 30-year-old nulliparous woman with term pregnancy and in her latent phase was admitted to our hospital. Her blood group was O negative. After seven and a half hours in labor, the cervix became fully dilated. An hour later, due to persistent fetal bradycardia at station +1 Simpson forceps was applied, but it was unsuccessful. After 45 minutes, cesarean section was performed under general anesthesia through a Phannenstiel incision and a perceived lower uterine segment incision was made just above the fetal head.

A female neonate weighing 3200 grams was delivered with an Apgar score of 7/10 at first and fifth minute. The incision had an extension on the right side and a transverse web was visible at the posterior wall of the uterus. The tissue underneath the web seemed to be vaginal mucus. An examination at the lithotomy position revealed that the incision was in the vagina instead of lower segment of the uterus. The incision was repaired in two layers. Before closing the abdomen, the patient was found to be oliguric. Her blood pressure was 120/60 mmHg and because of profuse bleeding and due to the short blood supply at the time, she received 4 liters of fluid including 5% DW and Ringer Lactate and one unit of blood. In the absence of convincing reason for the oliguria and despite weak possibility of bilateral ureteral obstruction, we decided to inspect the urinary system and expose the ureters. The inspection was first carried out on the right side of the incision where there was an extension. We found that the right ureter was obstructed between the sutures and its overlying portion dilated.

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The ureter was freed and its integrity preserved after removing some sutures on the ureteral wall. Fortunately the damage to the ureteral wall was not significant. The bladder was also intact as shown by dye instillation and the urinary output was corrected in the meantime. The operation lasted one hour and 45 minutes. The patient’s hemoglobin dropped from 14.5 g/dl (before c/s) to 10.2 g/dl the day after the operation. The patient was discharged from the hospital after 5 days, but was re-admitted 3 days later for wound infection. Having treated the infection, she was discharged after 4 days. Her clinical examination, renal tests and ultrasound of the urinary system performed three weeks later were all normal.

Discussion

Data about incidental vaginotomy during cesarean section is very limited and its prevalence is not known well. We believe that many of such cases remain undetected. In one study the prevalence was known well. We believe that many of such cases resection is very limited and its prevalence is not known. Incidental vaginotomy may be unavoidable, yet we believe that every effort must be made to prevent it as far as possible. In our view, to avoid this problem, the lower uterine segment incision must always be made one or two centimeters below the reflection of the peritoneum above the margin of the bladder overlying the anterior lower uterine segment irrespective of the location of the presenting part. In cases of deep fetal head entrapment, the technique of reverse breech delivery is helpful and safer than vaginal pushing up process. In cases of incidental vaginotomy, a liberal check up for the ureters is recommended.

References