



Isolated Rectal Laceration Following Normal Spontaneous Vaginal Delivery and Delayed Rectal Hemorrhage

Yuzuru Anzai*

Department of Obstetrics and Gynecology, NYU Langone Medical Center, New York, USA

***Corresponding author:** Yuzuru Anzai, *Department of Obstetrics and Gynecology, NYU Langone Medical Center, New York, NY, USA, E-mail: anzaiy01@nyumc.org*

Abstract

A 37-year-old Para 0 patient underwent an induction of labor due to chronic hypertension. She had a successful normal vaginal delivery but experienced acute cardiovascular collapse immediately following the delivery requiring massive transfusion. She also was found to have an isolated rectal laceration without laceration of anus or anal sphincter. After she was discharged home she presented to the emergency room with rectal hemorrhage 5 days after the initial repair requiring an additional two units of packed red blood cell transfusion. This case is presented for this rare complication of vaginal delivery.

Introduction

Perineal laceration at the time of childbirth involving the rectal mucosa is classified as a fourth degree laceration and is generally accompanied by a third degree (anal sphincter) laceration as the laceration extends towards the anus. However there have been few case reports in which isolated rectal laceration was noted without anal sphincter tear [1-4]. While these incidents were most likely underreported and the accurate incidence is not known, they are considered to be extremely rare.

We had a case in which a patient incurred rectal laceration through the recto-vaginal septum about 3 cm above the hymenal ring. The anal sphincter and anus were completely intact. 5 days after the laceration repair the patient had rectal bleeding significant enough to require 2 units of packed red blood cell transfusion.

In addition to this unusual complication, her postpartum course was complicated with acute change in her status, hypotension, massive blood loss, and coagulopathy possibly consistent with amniotic fluid embolism [5,6].

Case

The patient is a 37-year-old G1P0000 at 39 weeks gestation. Her prenatal course was complicated by:

1. Chronic Hypertension. She was on hydrochlorothiazide, which was changed to alpha methyldopa at the time of the pregnancy diagnosis. Her blood pressure was well controlled.
2. Advanced maternal age. She had a negative non-invasive prenatal screening utilizing cell free fetal DNA.

She had no surgical history and no instrumentation in the uterus.

Because of her chronic hypertension she was admitted for induction of labor. She underwent cervical balloon placement followed by intravenous pitocin infusion for her induction. Cervical balloon was expelled 8 hours after its insertion and Pitocin was started. 10 hours later she achieved full dilatation of the cervix and had a normal spontaneous vaginal delivery of a female infant, in direct occiput anterior position, 3445 g, Apgar 9/9. Her second stage was 1 hour and 35 minutes. During the second stage she was noted to have developed a vaginal laceration and was estimated to have lost 500 ml of blood prior to the delivery of the infant. Her 3rd stage was 5 minutes. Immediately after the delivery of the placenta, the patient became unresponsive and was found to be hypotensive. The obstetrical hemorrhage team, which consisted of intensive care specialists, anesthesiologists and obstetrical providers, were called. The patient received intravenous fluid bolus resuscitation, placement of an additional intravenous line and insertion of a central venous line and arterial line. Initial hematocrit after her hypotensive episode was 8.8%. Her PT was greater than 100, INR was greater than 10 and PTT was greater than 200. A massive transfusion protocol was begun. In total she received 10 units of packed red blood cells, 7 units of fresh frozen plasma, 2 units of platelets and 1 unit of cryoprecipitate.

The perineal laceration was repaired in the usual manner and the repair was completed within 15 minutes of the delivery of the placenta. However, after the repair, a rectal examination was done and she was noted to have a 1.5 cm rectal laceration 3 cm above the level of hymenal ring. Since the patient's condition was unstable, the repair of the rectum was deferred. No excessive bleeding was noted from the vagina.

Estimated blood loss including 500 ml prior to the delivery was 2300 ml. To confirm that there was no other bleeding site, the patient was transferred to the main operating room. She underwent examination under general anesthesia, diagnostic laparoscopy and repair of the rectal laceration. Laparoscopy showed no intra-abdominal bleeding. No sign of vaginal/vulvar hematoma was noted. The rectal laceration was repaired with 2 layers of #3-0 vicryl running sutures.

She recovered appropriately after these procedures and was discharged home on postpartum day 5. However upon defecating for the first time post-discharge, she started to have active bleeding from rectum and was readmitted.

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Examination revealed that the rectal repair was intact and rectal packing was placed. She received an additional 2 units of packed red blood cell transfusion. Rectal surgery was consulted and the decision was made to manage the patient conservatively as it was felt that to do additional repair at this time would carry a high risk of failure.

The following day after 2 episodes of defecation, she had no more rectal bleeding and was discharged home. She was seen one week later and reported no excessive vaginal bleeding and no rectal bleeding. Rectal repair was confirmed to be intact at this visit.

Discussion

Rectal laceration without third degree laceration is considered to be an underreported, yet rare complication of vaginal delivery. In the literature 6 case reports were identified. Of these, 2 were vaginal breech delivery, 1 was vacuum and the remaining 3 were normal spontaneous vaginal deliveries including a compound presentation [1-4].

Careful vaginal examination after the repair of an obstetrical laceration has been emphasized to detect hematoma and suture placements in rectum, but it is especially important in light of this rare complication. If a rectal laceration is not recognized and left untreated, it can potentially lead to infection and recto-vaginal fistula formation.

In the case presented here, the patient had further significant bleeding from the rectum 5 days after the repair was done. The most likely source of bleeding was the laceration repair site. The repair was carried out in a standard two-layer closure and it is highly unusual for a patient to have significant bleeding from the rectal laceration repair.

The patient's acute change in her status, hypotension and coagulopathy may be consistent with an amniotic fluid embolism. However the diagnosis of this additional rare complication is hard to establish. Since she did respond to resuscitation with blood products very quickly, another explanation could be hypovolemic shock due to acute blood loss. However, she never had uterine atony nor did she have a severe perineal laceration. Even though she had a rectal tear, she did not have rectal bleeding right after the delivery. The possibility that ischemia from hypovolemia played a role in developing rectal

laceration cannot be ruled out completely. However it is probably unlikely since the rectal laceration was recognized immediately after the delivery and probably too short a time interval for ischemia to have an effect on the rectal tissue.

In summary this patient experienced cardiovascular collapse following delivery, possibly due to amniotic fluid embolism. Furthermore, she had a rectal laceration without sphincter or anal laceration, which was complicated by delayed hemorrhage. She was seen 1 week and 6 weeks after the delivery. Rectal laceration had healed completely and no sign of recto-vaginal fistula was identified. She did not report any fecal incontinence, nor had she any sequel from the hypovolemic shock she experienced, and had recovered completely.

This case was presented to demonstrate:

1. Isolated rectal laceration following normal vaginal delivery. This case illustrates the importance of rectal examination in all vaginal deliveries even if they were seemingly uncomplicated. This case was also complicated by delayed hemorrhage, which was managed conservatively and she did well.
2. Acute cardiovascular collapse, which could be consistent with amniotic fluid embolism. The team of health care providers worked effectively to save this patient's life from this potentially catastrophic event. We cannot stress the importance of a multidisciplinary team approach [6].

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