Retroperitoneal Hematoma Following Cesarean Section: A Case Report

Ayse Nur Aksoy¹, Berrin Goktug Kadioglu¹, Mehmet Emin Aksoy¹, Sibel Ejder Tekgunduz¹ & Nurcan Yoruk¹

¹ Department of Obstetrics and Gynecology, University of Health Sciences, Erzurum City Hospital, Erzurum, Türkiye

ABSTRACT

Background: In this case report, a retroperitoneal hematoma developed after an uncomplicated cesarean section.

Case report: A 37-year-old patient with a term pregnancy was hospitalized for elective cesarean section with the diagnosis of repeated cesarean section. A live female baby of 3040 grams was delivered. There was no complication during surgery. The patient was transferred to the service postoperatively. Fainting sensation, tachycardia, tachypnea, and hypotension occurred in the first postoperative hour. In the CT scan, a 108x105 mm hematoma was observed in the right lateral retroperitoneal area of the uterus. When the hemoglobin value was 6.9 on the postoperative 1st day, 2 Units of erythrocyte suspension and 2 Units of fresh frozen plasma were given to the patient. The patient’s vital signs remained stable for 4 days postoperatively.

Conclusion: The retroperitoneal hematoma is a potentially life-threatening condition. Conservative or surgical treatment should be applied according to clinical findings.

KEYWORDS
Cesarean section; retroperitoneal hematoma; hemodynamics; conservative.

How to cite this article

Copyright license
This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International license (CC BY 4.0).
Introduction

Retroperitoneal hematoma is a life-threatening complication of delivery and is characterized by acute or subacute hemorrhage into the retroperitoneal space. There are vascular, muscle, and nerve structures in the retroperitoneal space. Retroperitoneal hematoma may occur with damage to these structures in the retroperitoneal area.\textsuperscript{1,2} Retroperitoneal hematoma has no specific findings and can be fatal if not noticed. There are few cases of retroperitoneal hematoma developing after vaginal delivery and cesarean section in the literature.\textsuperscript{3-5}

In this case report, a retroperitoneal hematoma developed after an uncomplicated cesarean section and followed up without surgery was presented.

Ethic Statement

This case study was carried out in accordance with the Helsinki Declaration. Written informed consent was obtained from the patient that she agreed to publish the case.

Case presentation

A 37-year-old patient with a term pregnancy was hospitalized for elective cesarean section with the diagnosis of repeated cesarean section. The patient's weight was 96 kg, height 165 cm, body mass index 35.3, and hemoglobin 12.4 g/dL. The coagulation profile and biochemical parameters were normal. Elective cesarean section was performed, and a live female baby of 3040 grams with an Apgar score of 9 at the first minute was delivered by head presentation. There was no complication during surgery. At the end of the operation, the patient developed temporary hypotension, which was thought to be due to spinal anesthesia. The patient was transferred to the service postoperatively. Fainting sensation, tachycardia, tachypnea, and hypotension occurred in the first postoperative hour. Blood pressure was 80/50 mm Hg, pulse 120/min, respiratory rate 20/min, and O2 saturation 90%. A 1000 ml isotonic intravenous infusion was started immediately. Oxygen was given by mask. Blood samples were taken for hemogram and biochemical analysis. Abdominal ultrasound was performed on the patient, and no pathological condition was observed. At the postoperative 1st hour, hemoglobin was 9.7 g/dL, and platelet count was 378,000/mm\textsuperscript{3}. The patient's vital signs stabilized.

The patient was mobilized at the 5th postoperative hour, and the hemogram was repeated, hemoglobin was 9.8 g/dL. When the hemoglobin value was 6.9 on the postoperative first day, two units of erythrocyte suspension and two units of fresh frozen plasma were given to the patient. On the other hand, abdominal tomodigraphy was performed. In the abdominal tomodigraphy, a 108x105 mm hematoma was observed in the right lateral retroperitoneal area of the uterus (Figure 1). The patient's vital signs and hemogram values remained stable for four days postoperatively. She was discharged on the postoperative 4th day with hemoglobin 10.7 g/dL. The patient was called for control on the 11th postoperative day and the hematoma size was measured as 10 cm with abdominal ultrasonography (Figure 2). Hemoglobin was 13.3 g/dL, and C-reactive protein (CRP) was 68. The general condition of the patient was good, his vital signs were stable, and she had no complaints. The hematoma size was measured as 9 cm in the postoperative one-month follow-up, hemoglobin was 13.1 g/dL, CRP was 38. (Figure 3). In the control examination at the postoperative second month, the diameter of the hematoma was 8 cm, hemoglobin was 13.2 g/dL, CRP was 9, and the patient had no complaints. (Figure 4).
Figure 1. Tomographic view of retroperitoneal hematoma.

Figure 2. Retroperitoneal hematoma with a diameter of 10x10 cm on the 11th postoperative day.

Figure 3. Retroperitoneal hematoma with a diameter of 9x9 cm at one month postoperatively.

Figure 4. Retroperitoneal hematoma 7x8 cm in diameter at two months postoperatively.
Discussion

Retroperitoneal space is a great space that locates posteriorly to the parietal peritoneum and anterior to transversal fascia and the posterior abdominal wall. Blunt or penetrating injuries to abdominal or pelvic organs, vascular aneurysm rupture, renal pathologies such as carcinoma, angiomyolipoma, and iatrogenic causes such as uterine rupture, anticoagulation therapy may lead to retroperitoneal hematoma. However, some cases are idiopathic and no cause can be identified. Retroperitoneal hematoma can be seen at the beginning of early pregnancy up to 4 weeks after delivery. It can begin acutely or subacutely. Nausea, vomiting, diarrhea, epigastric or abdominal pain, tachycardia, hypotension, and tachypnea may occur. In this present case, we reported a case of developing spontaneous subacute retroperitoneal hematoma following uncomplicated cesarean section delivery. The patient did not have complaints of abdominal or pelvic pain, but tachycardia, tachypnea, and hypotension were present.

Retroperitoneal hematoma, which may develop after vaginal delivery or cesarean section, is a rare complication and difficult to diagnose. It should be considered if the patient's hemodynamic parameters are suddenly impaired without postpartum vaginal bleeding. Luis Liu Perez reported a case of spontaneous retroperitoneal bleeding developing 24 hours after uncomplicated vaginal delivery in a patient in a patient without any risk factors for bleeding. The patient underwent emergency exploratory laparotomy, it was observed she had a spontaneous rupture of the uterine artery and multiple left adnexal veins. All bleeding vessels were ligated, 12 units were given to the patient, and the patient was discharged on the 4th postoperative day with full recovery. Dizajmehr et al. reported a case of successful conservative treatment for spontaneous retroperitoneal puerperal hematoma after cesarean section, similar in presentation to our case.

CT scan has been reported to be effective in diagnosing the presence of a suspected retroperitoneal hematoma. The choice of surgical or conservative treatment method depends on the patient's clinic, the size and location of the hematoma, and the patient's hemodynamic parameters. Conservative treatment is an option in hemodynamically stable cases. Surgical intervention (Laparotomy and evacuation), ultrasound-guided drainage, or arterial embolization may be done in hemodynamically unstable cases. In the case we presented, the patient's hemodynamics remained stable, and close observation, fluid resuscitation, and blood transfusion were sufficient. Similar to our case, Bisseling et al. reported a case of spontaneous retroperitoneal hematoma secondary to an arteriovenous malformation resulting in hemorrhagic shock, which was successfully treated with conservative management. In another case, Maroyi et al. presented a case of an extensive hematoma in the retroperitoneal space 2 weeks after a spontaneous nontraumatic vaginal delivery. They evacuated the hematoma with a laparotomy and the patient recovered.

In conclusion, the retroperitoneal hematoma is a potentially life-threatening condition. Early diagnosis, close monitoring of the patient's vital signs, fluid replacement, transfusion of blood products, and a multidisciplinary approach are essential. Conservative or surgical treatment should be applied according to clinical findings.

Conflict of interest

The authors declare that they have no conflicts of interest.
References


