



An Unusual Case of Post-operative Ascites after Cesarean Section Delivery

Maryam Rabiei¹, Soodabeh Darvish², Rima Ghozat³

1- Department of Obstetrics and Gynecology, School of Medicine, Women Hospital, Tehran University of Medical Sciences, Tehran, Iran

2- Department of Obstetrics and Gynecology, School of Medicine, Taleghani Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran

3- Department of Obstetrics and Gynecology, School of Medicine, Taleghani Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran

Received: 2 August 2015

Revised: 29 August 2016

Accepted: 31 September 2016

ARTICLE INFO

Corresponding author:
Maryam Rabiei

Email:
rabiei_maryam@yahoo.com

Keywords:

Ascites;
Post-operative complications;
Cesarean section

ABSTRACT

Post-operative ascites is a rare complication of cesarean section delivery. Herein, we presented a woman underwent cesarean section that leads to idiopathic ascites with no definitive cause. It seems that allergic or inflammatory peritoneal reaction may be responsible for this complication.

Citation: Rabiei M, Darvish S, Ghozat R. **An Unusual Case of Post-operative Ascites after Cesarean Section Delivery.** Case Rep Clin Pract 2016; 1(3): 68-70.

Introduction

Post-operative ascites is a rare complication of cesarean section delivery. Life-threatening and serious etiologies such as unrecognized bowel or urinary tract injury should be excluded promptly to avoid prolonged morbidity and even mortality (1, 2).

Occasionally, no definitive cause can be identified after an extensive diagnostic

workup. In such cases, idiopathic allergic or inflammatory peritoneal reaction may be the final diagnosis (3).

Case Report

A 29-year-old woman underwent cesarean section delivery due to repeat cesarean delivery.

The patient underwent cesarean through a Pfannenstiel skin incision and Kerr incision along the lower uterine segment. 5 gauze and

one long gauze were used. The whole operation took 30 minutes without any complications or manipulation.

On 2nd day post-operative, she had gas passage and defecation; urine output was also normal. Laboratory tests such as hematocrit were in normal range. She was discharged on the 3rd post-operative day. On 4th day post-operative, she returned to hospital with complaint of abdominal distention, abdominal pain, and reduced urinary output. She was ill but not toxic. Abdominal examination revealed abdominal distention and diffuse tenderness. There was no pedal edema.

The laboratory workup revealed the following results: Hemoglobin 12.2 g/dl (12.1-15.1 g/dl); total leukocyte count 15,000 cell/m³ (5000-11,000 cell/m³), the urine analysis was normal, serum creatinine 0.9 mg/dl (0.6-1.4 mg/dl) and blood urea nitrogen 22 mg/dl (8-25 mg/dl), liver function test was normal, sodium 132 (135-147 mEq/l), potassium 3.9 mEq/l (3.5-4.8 mEq/l), and serum albumin 3 mg/dl. The patient had no history of liver or kidney disease. Plain X-ray abdomen was normal. Ultrasound examination showed free fluid in abdomen. Kidneys, liver, and the bladder reported normal.

Preeclampsia was ruled out because the patient's blood pressure was normal throughout her pregnancy, during and after operation, and there was no sudden or significant weight gain detected. Furthermore, her laboratory tests - such as cell count, platelet count, liver function test, and urine analysis - were also normal.

The patient was suspected to post-operative peritonitis or urine leak. Bladder was catheterized. Then, laparotomy was performed and 2500 CC straw-colored accumulative fluid was aspirated, analyzed and cultured in laboratory.

Ovaries, bladder, uterus, and gastrointestinal (GI) tract were normal. Findings of cystoscopy were normal.

The abdomen was closed with a drain tube *in situ*. Biochemical analysis of the aspirated

liquid was normal (pH = 7.35, red blood cell = 5, white blood cell = 400, 60% polymorphonuclear neutrophil, total protein = 2.5, lactate dehydrogenase = 150, glucose = 100, triglyceride = 80, cholesterol = 150). Culture of the fluid was negative and its' cytological examination in the ascites was normal. Drain catheter removed after 48 hours. The patient was discharged on the 2nd day post laparotomy without any complication. The patient was visiting in our center for almost 1 year for her newborn routine checkup, during this period she had no complaint, therefore no furthermore evaluation was done.

Discussion

Ascites is an abnormal accumulation of free fluid within the peritoneal cavity. Serious etiologies of post-operative ascites are bowel and urinary tract injuries (4), but in this case, those were ruled out. Other causes of ascites include increased portal venous pressure, low plasma proteins (hypoproteinemia), chronic peritoneal irritation, and leakage of lymphatic fluid in peritoneal cavity or fluid overload. Since tuberculosis (TB) is not considered to be one of the causes of post-operative ascites and the patient's history was not in favor of TB, therefore, she was not evaluated for TB. Our suspect to GI tract perforation was one of the causes of 2nd time laparotomy. A surgeon was attending the operation; the GI tract was evaluated and there was no sign of perforation. Since the patient had no clinical finding in favor of pancreatitis, pre-operative computed tomography scan was not ordered. Liver function test in this patient was normal, and there was no sign and symptom of increased portal venous pressure. Plasma albumin was normal and she remains asymptomatic after the second laparotomy thus hypoproteinemia not suspect. Leakage of lymphatic fluid in peritoneal cavity occurs when intra-abdominal lymphatic nodes are transected or obstructed such as primary or secondary lymphatic malignancy (5).

Any inflammatory process in the peritoneal cavity could be due to increase in flow within the peritoneal blood and lymphatic vessels. Peritoneal microvascular permeability remarkable increased, with consequent exudation of plasma proteins and fluid into extravascular spaces. When the capacity of the lymphatic fluid is exceeded, it accumulates within the peritoneal cavity. The high protein concentration of this peritoneal fluid further retards fluid absorption. Maybe latex powder induce peritoneal inflammation and ascites, but in this patient, after her first cesarean section, she had no symptoms of ascites (3).

Gastric and ovarian cancers are the most notorious for causing ascites due to transperitoneal spread, but any peritoneal malignant process may be responsible (6). In this patient, cytological examination of fluid ascites was negative and at 1-year follow-up was normal.

Occasionally, no definitive cause can be identified after an extensive diagnostic workup. In such cases, idiopathic or allergic or inflammatory peritoneal reaction may be the final diagnosis.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

None.

References

1. Babic I, Tulbah M, Ghourab S. Spontaneous resolution of chylous ascites following delivery: a case report. *J Med Case Rep* 2012; 6: 187.
2. Arunkumar K, Selvakumar E, Vimalraj V, Jeswanth S, Jyotibas D, Surendran R. An unusual case of urinary ascites presenting as postoperative acute oliguric renal failure. *Trop Gastroenterol* 2013; 34(1): 52-3.
3. Jiang W, Cong Q, Wang YS, Cao BR, Xu CJ. Postoperative ascites of unknown origin after laparoscopic gynecologic surgery: a 5-year experience of 8 cases and review of the literature. *Surg Laparosc Endosc Percutan Tech* 2012; 22(3): e129-e131.
4. Milingos S, Protopapas A, Chatzipapas I, Kallipolitis G, El Sheikh A, Liapi A, et al. Postoperative ascites developing after laparoscopic surgery can become a difficult diagnostic dilemma. *J Am Assoc Gynecol Laparosc* 2001; 8(4): 587-90.
5. Leibovitch I, Mor Y, Golomb J, Ramon J. The diagnosis and management of postoperative chylous ascites. *J Urol* 2002; 167(2 Pt 1): 449-57.
6. Sangisetty SL, Miner TJ. Malignant ascites: A review of prognostic factors, pathophysiology and therapeutic measures. *World J Gastrointest Surg* 2012; 4(4): 87-95.