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Case Report

Case Report: Splenectomy Due to Splenic Rupture after Caesarian Section

Batool Teimoori[1*#] and Farahnaz farzaneh2[*#]

Abstract

Background: Splenic rupture with high maternal mortality is an exceedingly rare complication after pregnancy. Unfortunately, the diagnosis is often missed because of different diagnoses such as uterine rupture and abruption of placentae. Hereon we present a case of splenic rupture that manifested post caesarian section and she was treated with laparotomy and Splenectomy

Case: A 33 years old, gravida3, para 2, woman presented at 38 weeks of gestational age and gestational hypertension to Chabahar general hospital ,the patient was planned to do emergency caesarian section due to repeat caesarian section , 3 days after surgery , she was referred with dyspnea and oliguria .The patient was transferred to Imam Ali Hospital of Zahedan city for diagnosis and treatment because of low HB and oliguria , the patient underwent re-laparotomy and acute spleen rupture was suspected ,surgery intervention performed Splenectomy .She had an uneventful recovery and was discharged 7days after Splenectomy

Conclusion: Splenic rupture in pregnancy is a life-threatening complication. Early diagnosis and surgical intervention will allow for optimal maternal and perinatal outcome.

Keywords

Splenic rupture; Splenectomy; Cesarian section

Introduction

Rupture of spleen is a very rare complicating event during pregnancy and post caesarian section. Approximately 5%of cases reported have involved postpartum period, unrecognized, this condition is very fatal. Spontaneous splenic rupture during pregnancy is usually associated with underlying pathologic conditions including preeclampsia, trauma, perisplenic adhesions, or disease that might adversely affect the spleen and the lack of a preexistent anatomic abnormality within the substance of the spleen should be excluded. We present a post caesarian section of a woman with oliguria and dyspnea who underwent Splenectomy.

***Corresponding author:** Farahnaz Farzaneh, Infertility Fellowship, Gynecologist, Infectious Disease and Tropical Medicine Research Center, Zahedan University of Medical Science, Zahedan, Iran, Tel: 989151430835; E-mail: Farahnaz1826@yahoo.com

Batool Teimoori, Prenatology fellowship, Department of Obstetrics and Gynecology, Health Promotion Research Center, Zahedan university of Medical Sciences, Zahedan, Iran, E-mail: Taimoorib@yahoo.com

# Both authors of the present case report contributed equally to this work as first author.

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Case Report

This paper is about a 33 years old, gravida 3, para 2 women at 38 weeks of gestational age who was performed caesarian section due to repeat caesarian section and preeclampsia in Chabahar city of sistan and balouchestan province. 3 days after caesarian, she referred with dyspnea and anuria to hospital. Cardiovascular consult has been normal, 4 units packed cell and 3 units FFP transfused to the patient but abdominal ultrasound or CT scan has not done.

The 5th day of admission or 8 days after caesarian section, this patient was transferred to Imam Ali hospital of Zahedan city to nephrology ward. In Imam Ali Hospital, CV line was prepared on right internal jugular for hemodialysis and abdominal ultrasound and blood analysis were done immediately. Abdominal ultrasound showed: free fluid in Morison's pouch on bedside that predicts need for operative intervention and the blood analysis showed: Hb=4.6, PLT=96000, Cr=5.9, k=4.2, PT, PTT, LFT, Na=normal, LFT=normal.

After gynecology consult, emergency laparotomy was performed due to free intraperitoneal fluid found in Morison's pouch in patients with suspected incisional scar hemorrhage. There were 2-3 liters bloods and clots that were washed with 2 liters normal saline serum, the uterus and liver were normal.

The blood analysis on next day showed :Hb=6.1, PLT=101000, Cr=6, 3 hours hemodialysis was performed because of rising of creatinine and 5 units cryoprecipitate were transfused, and abdominal ultrasound was requested because of decreasing of HB, it showed a lot of free intra-abdominal fluids, so second laparotomy was performed, around 3-4 liters bloods was suctioned, general surgeon explored all the abdomen and Splenectomy was performed due to laceration >3 cm parenchymal depth of spleen (grade3). Blood analysis on the next day showed (HB=15.3, PLT=193000, Cr=5.3). Totally 22 units packed cell, 20 units platelet, 26 units FFP and 17 units cryoprecipitate were transfused to this patient, She underwent seven times hemodialysis and she was discharged 3 days post last laparotomy with Cr=2.

Discussion

A ruptured spleen is a medical emergency that occurs when the spleen develops a break in its surface. The most common cause of a ruptured spleen is blunt abdominal trauma such as in traffic collisions or sports accidents. Direct, penetrating injuries, for example, stab or gunshot wounds are rare [1]. Non-traumatic causes are less common. These include infectious diseases, medical procedures such as colonoscopy, hematological diseases, medications, and pregnancy. Without emergency treatment, a ruptured spleen can cause life-threatening internal bleeding [2]. Some people with ruptured spleens need emergency surgery. Others can be treated with several days of hospital care. In less than one percent of cases of infectious mononucleosis, splenic rupture may occur [3]. In one systematic review, in only 9.1% of patients were spontaneous splenic ruptures associated with drug and treatment-related causes and these included the use of anticoagulants, granulocyte-colony stimulating factors, thrombolytic, and dialysis [4].

Table 1: Splenic injury scale classification [3].

Grade	Subcapsular hematoma	Laceration
I	<10% surface area	<1 cm parenchymal depth
II	10–50% surface area	1–3 cm parenchymal depth
III	>50% surface area or expanding	>3-cm parenchymal depth
IV	Major devascularization (>25% of spleen)	
V	Completely shattered spleen	

Splenic rupture is usually evaluated by FAST ultrasound of the abdomen [5]. Generally this is not specific to splenic injury; however, it is useful to determine the presence of free floating blood in the peritoneum. A diagnostic peritoneal lavage, while not ideal, may be used to evaluate the presence of internal bleeding a person who is thermodynamically unstable [6,7]. The FAST exam typically serves to evaluate the need to perform a CT. Computed tomography with IV contrast is the preferred imaging study as it can provide high quality images of the full peritoneal cavity.

American association for the Surgery of Trauma Organ Injury Scaling includes (Table 1).

The cause of spontaneous rupture of the spleen in pregnancy is unknown It has been suggested that splenic enlargement, blood volume and reduced peritoneum cavity during pregnancy could be implicated in the pathogenesis of splenic rupture [3,7]. Estrogen and progesterone during pregnancy cause structural changes to the spleen that may increase the risk of splenic rupture during pregnancy even after minor trauma. Splenic rupture is more common in the 3th trimester, but some cases of spleen rupture occurred in the post-partum period. The splenic rupture during pregnancy is difficult to diagnose because the signs and symptoms overlap with other conditions such as uterine rupture and abruption of the placentae. The best treatment for patient with spontaneous splenic rupture is Splenectomy maternal mortality is due to huge hemorrhage and hemorrhagic shock and consumptive coagulopathy. Adel Elghanmi et al. reported a 26 years old gravida3, para2 woman at 35 weeks of gestational age referred with fatigue and tachycardia, the patient underwent emergency laparotomy and identified spleen rupture [7].

Hamedi et al reported primipara woman at 38 weeks of gestational age and preeclampsia that spleen rupture was found after caesarian section due to uncontrolled hypertension [7]. This paper presented a woman at 38 weeks of gestational age and history of gestational hypertension and Methyldopa consumption in the pregnancy that spleen rupture was happened 4 days after caesarian section due to hypertension.

Conclusion

Splenic rupture in pregnancy is a life-threatening complication. Early diagnosis and surgical intervention will allow for optimal maternal and perinatal outcome.

Reference

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Author Affiliations

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[1]*Prenatology fellowship, Department of Obstetrics and Gynecology, Health Promotion Research Center, Zahedan university of Medical Sciences, Zahedan, Iran*

[2]*Infertility Fellowship, Gynecologist, Infectious Disease and Tropical Medicine Research Center, Zahedan University of Medical Science, Zahedan, Iran*