

# A Case of Atraumatic Splenic Rupture in Twin Pregnancy

A. Akin SIVASLIOĞLU, Berfu DEMİR, Orhan GELİŞEN, Serdar DİLBAZ,  
Yılmaz SAHİN and İsmail DÖLEN

Ankara-Turkey

A 31 year old woman with 34 weeks of twin pregnancy underwent caserean section for fetal distress. Before the uterine incision, hemoperitoneum was observed and splenic rupture was detected when the origin of the bleeding was sought and primary repair was performed using compression sutures. As splenic rupture is a rare complication that is encountered during pregnancy, there might be a delay in diagnosis but emergency intervention is essential as haemorrhagic shock can easily develop in a short time.

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Atraumatic rupture of spleen is a rare clinical entity and is seen in 95% of the cases in the antepartum period during pregnancy if occurs.<sup>1,2</sup> The 'splenic emergency syndrome' is characterised by the onset of pain in the left hypochondrium of epigastrium, followed by hemorrhagic shock.<sup>3</sup> Absence of a history of trauma or an accident causes delay in diagnosis that leads to maternal and fetal mortality.

## Case Report

A 31-year-old woman, gravida 2 applied to emergency antenatal outpatient clinic with a complaint of abdominal pain. Vaginal examination revealed a 80% effacement, 5 cm dilatation of the uterine cervix and 34 weeks of twin pregnancy was observed at transabdominal sonography in which the first fetus was in vertex and the second fetus was in breech presentation. Intraperitoneal fluid of heterogenic echogenity was also observed at the bilateral upper quadrants of the abdomen via transabdominal sonography. Blood pressure was 110/70 mmHg and pulse rate was 68 beats/minute. Complete blood analysis of the patient revealed a hemoglobin level of 13.1 gr/dl, hematocrit 38.2%, leucocyte count of 11600 mm<sup>3</sup> and platelet count of 227000/mm<sup>3</sup>. Biochemistry studies were all in a normal range.

After admittance to the delivery ward, external cardiac monitorisation was performed and late decelerations were observed. Emergency cesarean section was performed for fetal distress. A hemoperitoneum of 1000 ml was observed in the abdominal cavity before the uterine incision. The birth weight of the neonates were 2750 gr and 2000 gr,

*Department of Obstetrics and Gynecology, Ministry of Health Ankara Etlik Maternity and Womens' Health Teaching Research Hospital, Turkey*

Address of Correspondence

*Berfu Demir*

*ODTU-Kent No: 1904-6*

*Orta Doğu Teknik Üniversitesi,*

*TR-06531 Ankara Turkey*

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respectively. Apgar scores at 1 minutes were 8. After primary repair of the uterine incision, a vertical abdominal incision was performed for exploration of the upper abdomen. The spleen was oedematous and a bumerang shaped 2 cm long active bleeding rupture of the capsule in the lower pole was observed. Haemostasis was achieved by two compression sutures and Surgicel® (Ethicon, USA.) covering the ruptured capsule. Postoperative recovery was uneventful and the patient was discharged at the thirteenth day.

The patient had no history of trauma but the only stressful physical activity mentioned by the patient was stretching her abdomen in order to reach a cupboard two hours before admittance to hospital.

## Discussion

Spontaneous splenic rupture in pregnancy was first reported by Saxtorph in 1803.<sup>4</sup> This complication occurs in diseased (infection, haematological, metabolic, iatrogenic, miscellaneous disorders and drug therapy) or even in normal spleen. In publications, pregnancy is categorized as miscellaneous disorders.<sup>3</sup> Maternal and fetal mortality rates of these cases ranges between 0%-45%, and 47-82%, respectively.<sup>5,6</sup>

Volume of the abdominal cavity is decreased due to the enlarged uterus during pregnancy. In addition to this, increased maternal plasma volume and splenic enlargement are risk factors for splenic rupture which may well be aggravated by initiation of uterine contractions. In cases of congenital malposition of the spleen like short splenic pedicle or deeply recessed location, there is an increased risk of splenic rupture because of diaphragmatic compression during coughing, sneezing, stretching and uterine contractions.<sup>7,8</sup>

Pain and tenderness at the left upper quadrant of the abdomen are the main clinical signs of splenic rupture but in cases of pregnancy these symptoms can be shadowed by the the initiation of uterine contractions.

Emergency intervention is essential as haemorrhagic shock may develop in a short time. In the presence of perisplenic haematoma or intraperitoneal fluid at ultrasonographic examination, splenic rupture should be suspected.<sup>9</sup>

Traditionally surgical treatment of splenic rupture is splenectomy but in our case, two compression sutures with surgicell covering were sufficient for achievement of haemostasis.

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