CASE REPORT

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Spontaneous Rupture of Venae Gastricae Breves in Pregnancy: Case Report

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ABSTRACT

Introduction: Hemoperitoneum caused by venous bleeding from the hilum of the spleen is a rare cause of acute abdomen in the last trimester of pregnancy. **Material and Methods:** We are presenting a case of a twenty-nine-year-old primipara with the clinical picture of acute abdomen. **Case report:** Primipara in the 36th week of pregnancy presented with the clinical picture of acute abdomen with the ultrasound finding of free fluid in the abdominal cavity and foetal bradycardia. Considering the clinical picture of the mother and the risks for the foetus, it was decided to complete the pregnancy with an emergency caesarean section. During the procedure, exploration of the abdominal cavity found the bleeding site from the venae gastricae breves, and a surgeon stopped active bleeding. **Conclusion:** Non-obstetric bleedings are not common in pregnancy, but they are life-threatening both to the mother and the foetus. The exact cause is usually found during the surgical procedure. If a pregnant woman presents with a clinical picture of abdominal pain, and the signs of foetal distress or clinical instability of the mother are also present, an emergency surgical procedure is indicated. In this case, the indication was foetal bradycardia, and the child was born alive by a caesarean section, while an extended surgical procedure saved the mother's life.

Keywords: acute abdomen, pregnancy, bradycardia.

1. INTRODUCTION

Intra-abdominal bleeding in pregnancy is an acute life-threatening condition for the mother and the foetus, and is manifested by the symptoms of acute abdomen.

Given the unspecific clinical picture, the final diagnosis and the cause are most often established by a surgical procedure. The decision on laparotomy is made based on the clinical status of the mother and the biophysical profile of the foetus. If there are objective indicators of the risks for the foetus, such as bradycardia, it is indicated to complete the pregnancy with an emergency Caesarean section (1). Venous bleeding from the spleen's blood vessels is a rare cause of acute abdomen. This case study presents a pregnant woman in the 36th week of gestation who has developed a clinical picture of acute abdomen due to venous bleeding from the hilum of the spleen.

2. AIM

The aim of this case report is to show the fact that extremely rare cases of acute abdomen as venous bleeding from the hilum of the

spleen, for example, happen in pregnancy as well.

3. MATERIAL AND METHODS

We are presenting a twenty-nine-year old primipara with clinical picture of acute abdomen with the ultrasound finding of free fluid in the abdominal cavity and foetal bradycardia.

4. CASE REPORT

Twenty-nine-year-old pregnant woman in the 36th week of pregnancy was diagnosed with an abscess of the pilonidal sinus, so the incision and evacuation of the pus was performed under a short-acting intravenous anaesthesia. Following the surgical procedure, the pregnant woman underwent a gynaecological examination monitored by a team of obstetricians. The obstetric and ultrasound findings were normal. From the medical history, it was established that the pregnant woman had a congenital agenesis of her left kidney and her left Fallopian tube, and that she underwent a surgery for an inguinal hernia on the left side in her childhood. When the patient was

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16, an adnexectomy on her right side was performed, and the diagnosis of unicornuate uterus was set during the surgical procedure. Her pregnancy is the result of an IVF procedure, has a normal course and is monitored on a regular basis. On the day when the incision was made, the pregnant woman was brought by an ambulance to the emergency maternity outpatient clinic due to abdominal pain. Upon admission, laboratory workup was performed; from the findings: E 4.4; Hb 112, Hct 0.348; L 16.1; T 204; CRP 3.6. A foetal bradycardia 60/min and free fluid in the abdominal cavity were determined by an ultrasound. Given the above, it was decided to complete the pregnancy by an emergency Caesarean section, so an alive premature female infant weighting 2510 g and 45 cm in length, Apgar score 4/7, was born by a breech extraction. During the surgical procedure, a surgeon was called due to abundant fresh bleeding from the upper portion of the abdomen. Because of the necessary exploration of the complete abdomen, the incision was extended to the median portion up to the xiphoid. Abdominal and pelvic organs were exposed, and venous bleeding was found in the hilum of the spleen. Haemostasis was established by placing sutures on venae gastricae breves. Following the surgery, due to the extensive nature of the surgery and according to the recommendation of the anaesthesiologist, the patient was moved to the Intensive Care Unit of the Clinic. During her stay at the Intensive Care Unit, the patient was haemodynamically stable and her respiratory status was stable; thus, the first day following the surgery she was moved to the Maternity Ward. Postoperative therapy: Fragmin 5.000 intravenous units subcutaneously, Methergin 3x1 amp iv., Zepilen 3x1 g for 3 days and Novocef 2 x 500 mg for 5 days. On three occasions, the patient was administered 100 ml of 20 % albumin and 2 doses of preparation of red blood cell concentrates. She was monitored by a team of surgeons, the wound from gluteus incision was dressed regularly. Abdominal ultrasound after the procedure was normal, and there was no free fluid in the abdomen. Subjectively, the patient did not feel any discomforts. The patient was discharged to home care on the 13th day following the caesarean section, with the recommendation of rest and diet rich in proteins. Th.: Novocef 2 x 500 mg and iron and vitamin C supplements. Follow-up examination by a gynaecologist in 2 months was recommended, as well as regular dressing of gluteus incision in accordance with the surgeon's recommendation. Upon discharge from the hospital, abdominal wound was healing normally, and her gynaecological finding was normal. Histopathological finding of the placenta describes placenta of normal structure for gestation, of weight for 10th percentile, and in the region of the basal decidua bleeding areas can be found located around the blood vessels of the umbilical cord.

5. DISCUSSION

The acute abdomen is defined as a sudden condition in the abdominal region, which is characterised by pain and which often requires surgical intervention (2). Various diseases and conditions can cause an acute abdomen,

and any of these conditions can occur in pregnancy (3). From the viewpoint of differential diagnostics, causes are divided into gastrointestinal, gynaecological, obstetric and urological. An incidence is 1 in 500-635 pregnancies (4).

When evaluating a patient, in addition to the usual diagnostic procedures, continuous foetal cardiac activity monitoring is required. Foetal cardiac activity may be directly related to the cause of abdominal pain (e.g. abruption of the placenta) or result from a condition of the mother (hypotension, infection) (5).

Dislocation of abdominal organs, laboratory changes (anaemia, leukocytosis), distended abdomen, Braxton Hicks contractions and other physiological changes that are characteristic of pregnancy make it difficult to set a diagnosis (6).

The most common causes of abdominal pain during the second half of pregnancy are abruption of the placenta, liver distension caused by preeclampsia or HELLP syndrome, uterine rupture, degenerative changes of myoma, torsion of the myoma, intra-amniotic infection (5). A rare cause is spontaneous hemoperitoneum (7, 8) which presents a life-threatening condition for mother and foetus (9). Obstetric causes of such bleeding are rupture of the uterus or uterine blood vessels, whereas non-obstetric causes are spontaneous rupture of the umbilical vein of the mother, rupture of the spleen arteries aneurism, spleen veins rupture, and liver rupture (9-11).

Intra-abdominal bleeding manifests clinically with abdominal pain, i.e. haemorrhagic shock of the mother, and with bradycardia of the foetus.

The ultrasound finding of the foetal distress was the major cause of the urgent completion of the pregnancy in our case.

An emergency caesarean section was performed and the child was born alive, while an exploration of the abdomen found the venous bleeding site from the hilum of the spleen. The exact cause of such bleeding in this case can only be suspected. The medical history of the pregnant woman showed no trauma. It is possible that during the incision of the pilonidal sinus that the patient had on that day, an inadequate movement could cause a vein rupture.

By searching the literature, it was established that venous bleedings from the spleen in pregnancy are extremely rarely described. Usually, bleedings caused by a rupture of spleen arteries aneurism in pregnant women with portal hypertension are described.

6. CONCLUSION

Non-obstetric bleedings in pregnancy are rare, but can be fatal for both mother and foetus. After exclusion of the pregnancy-related causes of bleeding, in case of a pregnant woman with the clinical picture of acute abdomen or haemorrhagic shock it is necessary to suspect intra-abdominal bleeding of non-obstetric aetiology (12). Based on the clinical picture of the mother, it is necessary to make a decision on an emergency surgical procedure, and depending on the gestational age and the foetal status, to indicate the completion of pregnancy with a cae-

sarean section. Certainly a multidisciplinary approach is needed, involving neonatologists, surgeons, anaesthesiologists and gynaecologists in order to adequately care for mother and child.

- **Declaration of patient consent:** The authors certify that they have obtained all appropriate patient consent forms.
- **Author's contribution:** Z.K. and I.S. gave substantial contribution to the conception or design of the work and in the acquisition, analysis and interpretation of data for the work. V.K. and I.D. had role in drafting the work and revising it critically for important intellectual content. D.V.V. and D.B. gave final approval of the version to be published and they agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.
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