INTRODUCTION

Rectus sheath hematoma (RSH) is an uncommon and often clinically misdiagnosed cause of abdominal pain. It is the result of bleeding into the rectus sheath from damage to the superior or inferior epigastric arteries or their branches or from a direct tear of the rectus muscle.

We report a case presenting with a diagnostic dilemma and was misdiagnosed as degenerating uterine leiomyoma, abruption of placenta and ruptured uterus.

CASE REPORT

A 37 years old patient, 5th gravida with term pregnancy presented to emergency department in the evening with complaints of bouts of severe cough for 3 days and sudden onset of right hypochondrium and right loin pain few hours prior to admission. She complained of palpitation and cold sweating, but there was no nausea, vomiting or change of bowel habits. The fetal movements were satisfactory. She had all full term normal vaginal deliveries in the past and her last born child was 5 years old.

Her past medical and surgical history was not contributory and she denied the use of anticoagulant and antiplatelet agents. On examination, her respiratory rate was 16 breaths per minute, pulse rate was 86 beats per minute and blood pressure was 134/84 mmHg. On abdominal examination, the height of fundus corresponded to term; lie of the fetus was longitudinal with cephalic presentation and fetal heart rate was in the normal range. The paraumblical region was tender on touch, otherwise her gravid obese abdomen was soft with no rebound tenderness. Her haemoglobin was 13 g/dl; haematocrit and platelets count were 37% and 203,000/mm³ respectively. Blood biochemistry profile was within normal limits and CTG (cardiotocography) was reactive. Ultrasound abdomen showed single alive fetus with fundal placenta and no evidence of retroplacental hematoma but there was an avascular hypoechoic area on the right side of uterine wall. Opinion was taken from surgical colleagues to rule out surgical cause of pain, and a probable diagnosis of degenerating uterine leiomyoma was made, she was kept under sedation and observation. Early morning at 6:00 am the severity of pain increased and CTG showed unprovoked deep decelerations. Her pulse was 110 b/m and blood pressure dropped to 90/60 mmHg. On abdominal examination abdomen was tender and a 4 x 6 cms size swelling was noticed in the paraumblical region. Due to sudden tachycardia, hypotension, CTG changes and paraumblical swelling a possible diagnosis of abruption placenta or ruptured uterus was made and emergency laparotomy and caesarean section was performed. On opening the abdomen a large hematoma was found over the rectus muscles extending up to subcostal region. After delivering an alive 3.8 kg male baby, hematoma was evacuated and surgical repair of the torn epigastric artery and ruptured rectus abdominis muscles was done by general surgeon. Two pints of blood was transfused to stabilize her condition. She made an uneventful recovery and was discharged home on third postoperative day.

DISCUSSION

Rectus sheath hematoma is a well-described entity with a reported incidence of misdiagnosis as high as 93%, as happened in this patient. It occurs 2-3 times more often in women than men. The higher incidence in women is presumably due to the lower muscle mass as compared with men. RSH may occur due to trauma, blood dyscrasia, degenerating muscular disease, anticoagulant therapy, pregnancy, or spontaneous rupture of the rectus sheath.
epigastric vessel or the rectus muscle. Acute paroxysmal coughing, asthmatic attacks, bronchitis or influenza is the precipitating event in 56% of the cases. Rectus sheath hematoma usually occurs in the lower abdominal wall with the following anatomical considerations. Firstly in the lower abdomen below the linea semilunaris there is only weak transversalis fascia and peritoneum support the rectus and inferior epigastric vessels posteriorly. Secondly the branches of inferior epigastric pierce the rectus abdominis and are firmly attached to it. Thirdly the rectus muscle is usually crossed by three transverse intersections, with the lowest segment being the longest; hence muscle shortening and contractures are greatest at this level.

Three types of RSH can be distinguished by way of the severity of haemorrhage as delineated on CT scan. Type-1 RSH are unilateral hematoma contained within the muscles. Type-II RSH are bilateral hematomas or hematomas not contained within the muscle sheath. Type-III RSHs enter the prevesicular space or peritoneum. RSH can occur during all stages of pregnancy and in early postpartum period. Rectus sheath hematoma is more common in multiparous females. The most common precipitant factor in pregnancy is coughing reported in 73% of patients. The second most common precipitant is labour observed in 18% of patients.

RSH has been mistaken for many common acute abdominal diseases such as appendicitis, incarcerated intestinal hernias, urinary obstructions, acute cholecystitis, mesenteric vascular insult or dissecting aneurysms. In pregnancy, RSH has been misdiagnosed as ovarian torsion or ruptured uterus, abruptio placenta or degenerating uterine leiomyoma. An incorrect initial diagnosis is associated with increased rate of exploratory laparotomy, premature cesarean delivery and perinatal death.

A careful history and clinical examination is required to elicit the risk factors and precipitant events. Imaging techniques like ultrasound in one series was 100% sensitive. But on ultrasound, tumours may be confused with abdominal wall tumours. While failure rate of ultrasound in another series has been reported to be < 30%. In the patients with non-diagnostic findings on sonography, CT scanning may be used to make the definitive diagnosis, to prevent unnecessary exploratory laparotomy. MRI is also a reliable tool for diagnosis of RSH in non-pregnant patients. Conservative management is preferred in pregnant patients.

Surgery is advised if RSH ruptures into peritoneum, if complicating infection is present or if the patient is haemodynamically unstable. Surgery may also be required if the patient is unresponsive to initial fluid resuscitation. Caesarean delivery is performed for fetal indications. RSH has been associated with 50% rate of fetal demise.

The treatment of RSH comprises rest, analgesia, discontinuation of any anticoagulation therapy, blood and blood products transfusions (if needed) and clinical observation. Surgical procedure may be used for diagnostic purpose as well as in controlling continued haemorrhage or intraperitoneal rupture. In general surgical procedures consist of clot evacuation, ligation of all bleeding vessels and closed suction drainage.

Rectus sheath hematoma is an unusual though not rare cause of a painful abdominal mass that may present to the gynaecologist. A careful history and physical examination and a high degree of suspicion when performing ultrasound examination will assist in making the correct diagnosis. Although spontaneous haemorrhage into the sheath of the rectus abdominis muscle is uncommon in pregnancy, rectus sheath hematoma should be considered in patients who present with an acute onset of abdominal pain in the latter half of pregnancy or in the immediate postpartum period.

REFERENCES