



Rectus sheath hematoma – An uncommon complication following caesarean delivery

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Abstract:

Rectus sheath hematoma is a well documented clinical entity, though uncommon and often clinically misdiagnosed cause of acute abdomen. The non-specific nature of presentation combined with a lower incidence of the disorder leads to difficulty in diagnosing. Our patient presented with rectus sheath hematoma, following caesarean section on 9th post-operative day. She presented with wound discharge and lower abdominal pain. The case report is presented to increase the awareness in considering this entity in the differential diagnosis and management of acute lower abdominal pain. Rectus sheath hematoma's early diagnosis and appropriate treatment may help to prevent complications.

Key words: Rectus muscle, rectus sheath, hematoma, caesarean delivery

Introduction:

Rectus sheath hematoma is an uncommon complication following caesarean section and often clinically misdiagnosed cause of abdominal pains.^{1,2} Hematoma of the rectus muscle is an acute or chronic collection of blood lying within the muscle or between the muscle and its sheath. 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 muscle. Though rectus sheath hematoma is usually self limiting entity, it can cause hypovolemic shock following sufficient expansion, with associated morbidity and mortality.^{2,3}

Case report:

A 38-year old female patient, para living 1, post caesarean section day 9, presented with lower abdominal pain and bloody discharge from caesarean wound which was dark and profuse. This patient had undergone caesarean delivery 9 days back for major degree cephalo-pelvic disproportion and prolonged premature rupture of membranes. Intra-operative and post-operative stay in hospital was

uneventful except mild induration at wound site on 7th post-operative day. On physical examination, patient was pale, pulse was 128/min, BP 80/60mm of Hg, respiratory rate 24 cycles/min, temperature 98.8°F, per abdomen examination revealed palpable mass at right lower quadrant of the abdomen with mild tenderness and mild ecchymosis infraumbilically and positive Carnett's sign.

Now a complete blood count was done, revealed haemoglobin of 6.8gm%. Liver, kidney function tests and coagulation profile were all within normal limits. Her pre-operative haemoglobin was 10.2gm%. Ultrasound examination of the abdomen revealed non-mobile hypochoic lesion with internal echoes noted above muscular plane in the infraumbilical region with collection of 200-250ml. A provisional diagnosis of abdominal wall hematoma was made.

In view of expanding induration, ecchymosis and clinically increasing pallor of the patient, a decision for surgical exploration was taken. Under general anaesthesia, abdominal wound exploration was done. Hematoma located above rectus

muscle amounting to 300gm of blood clot was evacuated. Obvious bleeding points could not be defined. Wound was irrigated with normal saline. Rectus sheath closure was done using prolene- 1. Skin closure was done by intermittent mattress using Ethilon 2-0 and suction drains left in-situ beneath rectus. One unit of blood was transfused. Intravenous antibiotics and analgesia was given and post-operative recovery was uneventful. The patient was discharged on the 7th day. Sutures were removed on the 10th day.



Image I: Rectus sheath hematoma.

Discussion:

Rectus sheath hematoma is an uncommon and often misdiagnosed condition. Hematoma can develop due to rupture of epigastric vessels or its branches or tear of rectus abdominis muscle, extending potentially towards preperitoneal space or into free peritoneum. In 1999, Klinger et al found an incidence of 1.8% among 1257 patients admitted to the hospital with abdominal pain.¹ Although usually a benign self limiting condition, it may be fatal with overall the mortality rate reported to be 4%.¹ Rectus sheath hematoma is 2-3 times more common in females than in males. The higher incidence in women has been attributed to their decreased muscle mass and

pregnancy is a risk factor in younger females. Incidence increases with age and effects of arteriosclerosis and hypertension also renders the vessels more susceptible to injury. Usually presentation is painful as a tender abdominal swelling of sudden onset, but our patient presented with wound discharge as her main complaint.

Ultrasound is a good investigation for diagnosis of hematoma's location, site and expansion but CT abdomen in particular is more useful, permits correct diagnosis and is considered the investigation of choice.

Treatment may be either conservative or surgical. Conservative treatment is appropriate for patients who are hemodynamically stable and have small non-expanding hematoma in which symptoms are mild and the diagnosis is certain and it includes rest, analgesics, hematoma compression, ice packs, treatment of predisposing conditions and blood transfusion if necessary.^{2,4} Surgical intervention is needed for those with hemodynamic instability, expanding hematomas or symptomatic anaemia and it includes evacuation of the hematoma, ligation of bleeding vessels, repair of rectus sheath, drainage if indicated and closure of the abdominal wall which was carried out in this patient. Other treatment modalities are transcatheter embolization technique with thrombin, Gelform, or coil which is alternative to surgery for conditions not responding to conservative management.^{2,4}

This case is presented to raise the awareness in considering rectus sheath hematoma in the differential diagnosis. A persistent pain in the lower abdomen should arouse suspicion of rectus sheath hematoma in post-abdominal surgeries. Early diagnosis and management permits conservative management even in large hematomas and prevent complications such as, hemodynamic instability, abdominal compartment syndrome, multi-organ dysfunction or even death.

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