



## RECTUS SHEATH HAEMATOMA-AN UNCOMMON COMPLICATION FOLLOWING CAESAREAN SECTION

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### ABSTRACT

Rectus sheath haematoma is the accumulation of blood in the sheath of the rectus abdominis muscle as a result of disruption of the epigastric vessels or from a direct tear of the muscle itself. The aberrant course of vessels or injudicious dissection may contribute to this catastrophe. It encompasses a wide spectrum of severity - some self-limiting and others fatal depending on its size, etiology and the development of complications. Its common features include acute abdominal pain, fever, nausea and vomiting. The non-specific nature of these symptoms combined with the low incidence of the disorder lead to difficulty in diagnosis. Local trauma, coagulopathies, coughing, hypertension, and peripheral vascular disease could cause them. The haematoma usually occurs in the lower quadrants of the abdominal wall, is difficult to diagnose clinically and often radiologic imaging is required for its definitive pre-operative diagnosis. Our patient presented with rectus sheath haematoma, following caesarean section with ultrasonography findings suggestive of bladder flap hematoma. Patient was managed with exploratory laprotomy and haematoma drainage.

**KEYWORDS :** Rectus sheath hematoma, bladder flap hematoma, exploratory laprotomy, post caesarean section.

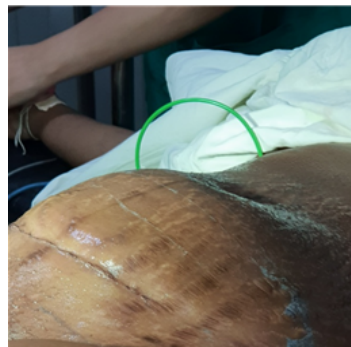
### INTRODUCTION

Rectus sheath hematoma is the most common primary non-neoplastic condition of rectus muscle and sheath. It is an uncommon complication following caesarean section and often clinically misdiagnosed cause of abdominal pain.<sup>1,2</sup> 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. Other causes includes abdominal surgery, blunt trauma, coughing, coagulopathies, pregnancy and anticoagulation therapy. They are usually located infraumbilically. Hematoma below the linea semicircularis causes an indirect irritation on the peritoneum due to weak posterior rectus sheath in this region leading to misdiagnosis as acute abdomen.<sup>5</sup> Though rectus sheath hematoma is usually self limiting entity, it can cause hypovolemic shock following sufficient expansion, with associated morbidity and mortality.<sup>2,3</sup>

### CASE REPORT

A 20 yr old female P1L1 resident of Shivaji Nagar with post caesarean section day 8 referred to our hospital in view of complaints of severe pain in lower abdomen and fever since 2 days. Patient had undergone caesarean section 8 days back in view of severe oligohydromnios with IUGR. There was a history of 2 pint packed cell volume transfusion post operatively. Rest postoperative period was uneventful except on postoperative day 6 patient had a complaint of lower abdominal pain. Patient does not give history of bleeding or foul smelling discharge per vagina. On clinical examination her pulse was 112/min, BP was 110/70mm of Hg and temperature was 100°F. Per abdomen examination, LSCS wound was healthy, bulge was noted over the lower abdomen and tenderness was present. Routine blood investigations were sent which came out to be normal.(haemoglobin-11gm%, TLC-12,000, platelets-3 lakhs). Patient had one outside ultrasonography report which was suggestive of hematoma of size 7x5cm (150ml) seen anterior and to the right of the uterus suggestive of bladder flap hematoma. Decision of exploration was made in view of large hematoma. Preanesthetic checkup was done and under high risk patient was posted for exploratory laprotomy with hematoma drainage. Intraoperatively, large hematoma of size around 200cc was noted beneath the rectus sheath. Hematoma was

drained. Obvious bleeding points could not be defined. On further exploration there was no evidence of hemoperitoneum or hematoma in the peritoneal cavity. Subcutaneous drain was placed. Intravenous antibiotics and analgesia was given and post-operative recovery was uneventful. Subcutaneous drain was removed on postoperative day 5, sutures were removed on 7<sup>th</sup> day and patient was discharged.



**Fig no1 showing bulge over the lower abdomen**



**Fig no2 showing large 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. Other causes includes abdominal surgery, blunt trauma, coughing, coagulopathies, pregnancy and anticoagulation therapy. In 1999, Klinger et al found an incidence of 1.8% among 1257

patients admitted to the hospital with abdominal pain.<sup>1</sup> Although usually a benign self limiting condition, it may be fatal with overall the mortality rate reported to be 4%.<sup>1</sup> 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. 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.<sup>2,4</sup> 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.<sup>2,4</sup> 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, multiorgan dysfunction or even death.

## CONCLUSIONS

Clinicians should think of a rare possibility of acute abdomen post operatively as rectus sheath hematoma. Other traditional causes have been excluded by standard investigations. High degree of clinical suspicion and timely diagnosis are essential prerequisites in its management.

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