

Traumatic Rectus Sheath Haematoma



Medical Science

KEYWORDS :

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ABSTRACT

Rectus sheath hematoma is an uncommon cause of acute abdominal pain.

We report three cases of rectus sheath hematoma presenting with tender lump in lower abdomen following history of trauma or exercise. Ultrasonography confirmed the diagnosis in two and the third one required Computerised Tomography. Two patients were managed conservatively whereas one required surgical evacuation of hematoma

Introduction:

Traumatic rectus sheath haematoma is a well recognised but rare condition with a few anecdotal cases reported in the world literature[1,2]. It is a well documented complication of blunt abdominal trauma.[3,4]. It is an accumulation of blood in the sheath of the rectus abdominis, secondary to rupture of an epigastric vessel or muscle tear. It may follow minimal trauma such as coughing, bending or during sudden severe muscle contraction. They are usually located infraumbilically and often misdiagnosed as acute abdomen, inflammatory diseases or tumours of the abdomen. Accurate diagnosis should be made to prevent an unnecessary laprotomy since bleeding into rectus sheath can produce a clinical picture of an acute abdomen

Cases:

Case 1

24 year old serving soldier presented with severe pain in the lower abdomen following sudden jerk while getting down from a 3 ton vehicle. The pain was severe but without radiation and it was exacerbated during coughing spells. There was no external bruise seen on abdominal wall. Firm tender lump was palpable in the hypogastric region on the right side. Laboratory tests showed haemoglobin as 13.5gm% and leucocyte count 12,300/cmm. Ultrasound examination revealed small haematoma in the right rectus sheath. Patient was initially managed conservatively with broad spectrum antibiotics and analgesics without much relief. Ultrasound guided aspiration of the hematoma was done and 20 ml of dark coloured blood was aspirated. Patient recovered fully and on follow up there was no recurrence of hematoma.

Case2

52 year old male allegedly sustained injury due to fall when he was gored by a cow. He developed swelling of the hypogastric region. Initially it was considered to be palpable bladder but swelling persisted even after catheterisation. Swelling gradually increased in size. Ultrasound examination revealed rectus sheath hematoma. Ultrasound guided aspiration was done and 50ml of serohemorrhagic fluid was drained. Patient developed recurrence of swelling. Subsequently surgical evacuation of haematoma was done and inferior epigastric vessels was ligated. Wound was closed in layers with tube drain which was removed after 24 hours. Patient showed uneventful postoperative recovery and was asymptomatic on follow up.

Case 3

21 year old serving soldier presented with painful swelling over right infraumbilical region following a jump into a five feet deep pit during his routine exercise. He was not able to walk and not able to raise his right leg.

Examination revealed a lump in right infraumbilical region which was 7x4 cm, tender, firm with irregular surface and well defined margins. Ultrasonography suspected it to be anterior abdominal wall hematoma and computerised tomography (CT) scan confirmed a 56x28x31 mm well defined hyperdense lesion within right rectus abdominis muscle (Fig 1a,b). He remained hemodynamically stable and there was no significant fall in his hematocrit, so was managed conservatively with analgesics. A repeat CT scan after four weeks has shown reduction in hematoma by half and the lump was completely resolved by twelve weeks.

Discussion

Rectus sheath hematoma (RSH) is a rarely seen but important disease causing abdominal pain. There is a female predominance as may be explained by larger rectus muscle mass in man[5]. However all three of our patients were male. There are various causes resulting in RSH as abdominal trauma, previous surgery, coughing, stretching, hypertension, intraabdominal injections, iatrogenic causes during laparoscopy and anticoagulation therapy[6,7]. In the abdominal wall below the arcuate line there's only transversalis fascia between peritoneum and posterior rectus sheath, therefore rupture of epigastric vessels or muscle within this sheath causes a hematoma mimicking acute abdomen [8]. Common presenting signs and symptoms are abdominal pain, abdominal wall mass, decrease in hemoglobin, abdominal wall ecchymosis, nausea, vomiting, tachycardia, peritoneal irritation, fever, abdominal distention and abdominal cramping [5].

Misdiagnosis may lead to unnecessary negative laparotomies with increase in morbidity and mortality[9]. US, CT and magnetic resonance imaging are widely used in the diagnosis. Although ultrasonography seems to be the procedure of choice due to its high sensitivity rates, time and cost effectivity and low radiation in some series[10]. However, CT is superior to US in localisation, extension and evaluation of the size of the hematoma. Conservative treatment is the mainstay of management in hemodynamically stable patients with non expanding hematoma[10,11,12]. In cases with failure of conservative treatment, surgical approach can be chosen but the mortality rates of sur-

gery for rectus sheath hematoma is high. Coil embolisation can be an alternative in high risk patients refractory to conservative therapy[11,12].

Conclusion

Rectus sheath hematoma is a rarely seen pathology often misdiagnosed as acute abdomen that may lead to unnecessary laparotomies. Ultrasonography is helpful in confirming the diagnosis. Computerized tomography must be chosen for definitive diagnosis since ultrasonography is subject to error due to misinterpretation of the images. Conservative treatment is the mainstay of management in hemodynamically stable patients with non expanding hematoma. In cases with failure of conservative treatment, surgical approach can be chosen.



Fig 1a,b: CT scan showing a 56x28x31 mm well defined hyperdense lesion within right rectus abdomens muscle.

References

1. Edlow JA, Juang P, Margulies S, et al. Rectus sheath hematoma. *Ann Emerg Med*1999;34:671-5.
2. Berna JD, Garcia-Medina V, Guirao J, et al. Rectus sheath hematoma: diagnostic classification by CT. *Abdom Imaging*1996;21:62-4.
3. Berna JD, Zuazu I, Madrigal M, et al. Conservative treatment of large rectus sheath hematoma in patients undergoing anticoagulant therapy. *Abdom Imaging*2000;25:230-4.
4. Hegenbarth R, Reiser C, Leib P. The sonographic diagnosis of a spontaneous rectus sheath hematoma. *Aktuelle Radiol*1991;1:201-3.
5. Cherry WB, Mueller PS. Rectus sheath hematoma. Review of 126 cases at a single institution. *Medicine*. 2006;85:105-110.
6. Casey RG, Mahmoud M, Carroll K, Hurley M. Rectus sheath haematoma: an unusual diagnosis. *Ir Med J*. 2000;93:90-92.
7. Luhmann A, Williams EV. Rectus sheath haematoma: A series of unfortunate events. *World J Surg*. 2006;30:2050-2055.
8. Maharaj D, Ramdass M, Teelucksingh S, Perry A, Naraynsingh V. Rectus sheath haematoma: a new set of diagnostic features. *Postgrad Med J*. 2002;78:755-766.
9. Linhares MM, Lopes Filho GJ, Bruna PC, Ricca AB, Sato NY, Sacalabrini M. Spontaneous hematoma of the rectus abdominis sheath: a review of 177 cases with report of 7 personal cases. *Int Surg*. 1999;84:251-257.
10. Costello J, Wright J. Rectus sheath haematoma: a diagnostic dilemma?. *Emerg Med J*. 2005;22:523-524.
11. Siu WT, Yau KK, Cheung HY, Law BK, Tang CN, Yang GP, LiMK. Spontaneous rectus sheath hematoma. *Can J Surg*. 2003;46:390.
12. Karabulut Z, Abci I, Lakadamyali H, Gebedek O. A case of rectus sheath hematoma. *Ulus Travma Acil Cerrahi Derg*. 2006;12:76-78.