Case Report

Dengue Fever With Rectus Sheath Hematoma: A Case Report

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Abstract

Dengue fever, also known as breakbone fever, is an infectious tropical disease caused by the Dengue virus. It is associated with a number of complications, which are well documented. However, Dengue fever associated with rectus sheath hematoma (RSH) is a very rare complication. Only one case report has been published prior supporting the association of Dengue fever with RSH. We report a case of Dengue fever who presented with RSH and was successfully treated conservatively. RSH is also an uncommon cause of acute abdominal pain. It is accumulation of blood in the sheath of the rectus abdominis, secondary to rupture of an epigastric vessel or muscle tear.

Keywords: Abdominal pain, Dengue fever, hematoma, rectus sheath

Introduction

Rectus sheath hematoma (RSH), an uncommon and often clinically misdiagnosed entity, is a rare cause of acute abdominal pain. RSH is an accumulation of blood in rectus abdominis sheath. It occurs as a result of damage to epigastric arteries or from a direct tear of rectus muscle. RSH is an ancient disorder and was first described by Hippocrates and mentioned by Galen. The first reported case was by Richardson in United States in 1857. The physician should be familiar with this entity because it can mimic almost any abdominal condition. The etiologies may include trauma, anticoagulant therapy, abdominal operations, subcutaneous drug injections, trocar site injury, hematological diseases, hypertension, exercise, pregnancy, etc. It commonly occurs in lower abdominal wall and usually does not cross the midline. We report a case of RSH with Dengue fever presenting with a mass in the abdomen and diagnosed by computed tomography (CT). The patient recovered uneventfully after bed rest, intravenous fluid replacement, blood transfusion, and analgesic treatment.

Case Report

A 40-year-old male patient, a local resident otherwise of good health, presented with fever 4 days before admission. The fever was not associated with chills or rigor. He also complained of generalized body ache, weakness, and diminished appetite. One day before admission, he developed abdominal distension and persistent nausea with 2-3 episodes of nonprojectile, nonbilious vomiting. Following vomiting, patient developed severe pain in the paraumbilical region, which extended to right hypochondrium and lumbar regions. The pain was continuous aggravated by movements of anterior abdominal wall including respiration. Patient also complained of increased urinary frequency. Pain was not related to food intake. Clinical examination revealed a restless individual, febrile (temperature 100.4°F), respiratory rate 24/min shallow, pulse 90/min, blood pressure (BP) 130/80 mmHg. Abdominal examination revealed distension with marked restriction of movement with respiration. Palpation of abdomen was markedly tender with guarding of umbilical and hypogastric regions. Bowel sounds were normal. On investigation, he had thrombocytopenia with anemia. NS1 antigen for Dengue was positive. Aspartate and alanine transaminase (SGOT/PT) were 118 and 82. Ultrasound whole abdomen showed elliptical parietal echogenic lesion with fluid level involving the right side of abdomen likely of hematoma/collection. This was confirmed subsequently by performing contrast enhanced CT abdomen. The CT scan revealed a hyperdense mass posterior to the rectus abdominis muscle with ipsilateral anterolateral muscular enlargement [Figure 1]. The enlarged right rectus sheath measured approximately 13 cm in longitudinal dimension, 8.0 cm in transverse diameter, and 3.0 cm in anteroposterior diameter. Inferiorly the enlarged rectus muscle

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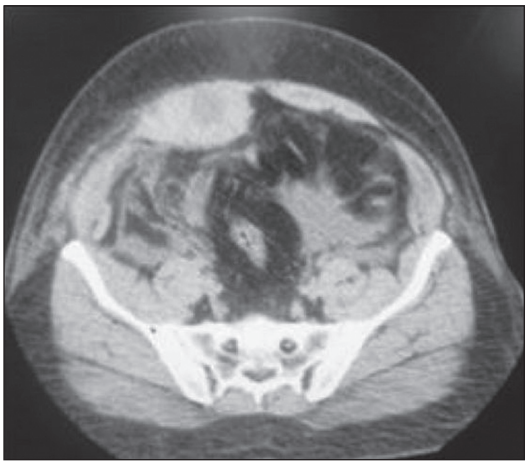

Figure 1: A 40-year-old male in a case of right rectus sheath hematoma. Axial CECT obtained by a multidetector scanner shows enlarged bulky hyperdense right rectus sheath

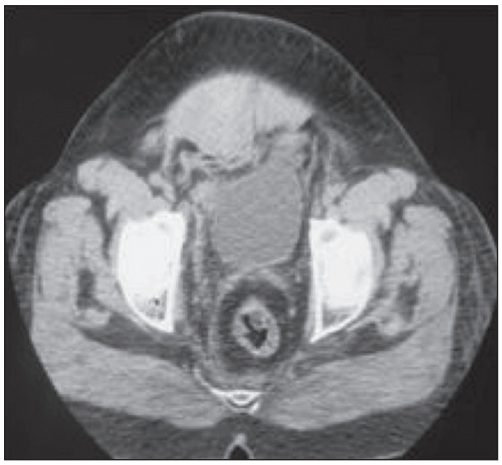

Figure 2: A 40-year-old male in a case of right rectus sheath hematoma. Axial CECT obtained by a multidetector scanner shows enlarged right rectus sheath causing compression on the urinary bladder inferiorly

was causing compression on the urinary bladder, which was the cause of increased urinary frequency [Figure 2]. Other system examinations were unremarkable.

Discussion and Conclusion

RSH associated with Dengue fever causing abdominal pain is rarely seen. We could only find one such case report in the literature. Female predominance is noted because of smaller muscle mass in women.[1] However, our patient was a male. There are various causes of RSH as trauma, anticoagulants, iatrogenic causes including surgery, coughing, hypertension, and intraabdominal injections.[2,3] Patients usually present with abdominal pain, abdominal wall mass, anemia, nausea, vomiting, fever, abdominal distention, and cramps.[1] Carnett sign is positive in RSH and helps in differentiating from intraabdominal diseases.[4-7] Bluish discoloration was seen in the periumbilical region resulting in Cullen's sign.[6]

The imaging modalities useful in diagnosis of RSH are ultrasonography (USG), CT, and magnetic resonance imaging (MRI). Ultrasound is the procedure of choice with its high sensitivity rates, cost–effectivity, and no risk of radiation. However sonographically, these hematomas may be confused with abdominal wall tumors.[8] CT is the investigation of choice. It is superior to ultrasound in localization of hematoma. CT also gives additional information about the extent and exact size of the hematoma. According to the CT classification, Type I hematomas are mild. The hematoma occurs within the muscle associated with increase in muscle length. Type II hematomas are moderate. The hematoma occurs within the muscle but bleeding occurs into the space between transversalis fascia and the muscle. Type III hematomas are severe and located between transversalis fascia and muscles, anterior to the peritoneum and urinary bladder. Type I patients do not require hospitalization. Type II and III hematomas require hospitalization. Our patient presented with type II hematoma, which progressed to type III. In Type I hematomas, hospitalization is not required usually and spontaneous resorption occurs within 1-2 months. In Type II lesions, conservative treatment like bed rest, fluid replacement, and analgesia is the most appropriate treatment. In Type III lesions, additional blood product transfusions are required. The patient was discharged after 10 days of hospitalization and was kept on regular follow up. Complete resolution of the hematoma happened after 2 months on follow up visit. These kinds of hematomas resorb approximately in 3 months.[7] Conservative treatment is the mainstay of management in hemodynamically stable patients with nonexpanding hematoma.[4,7,8]

References

1. Luhmann A, Williams EV. Rectus Sheath hematoma: A series of unfortunate events. World J Surg 2006;30:2050-5.
2. Linhares MM, Lopes Filho GJ, Burna 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;84:251-7.
3. Berná JD, Garcia-Medina V, Guirao J, Garcia-Medina J. Rectus Sheath hematoma. Diagnosis classification by CT. Abdom Imaging 1996;21:62-4
4. Siu WT, Yau KK, Cheung HY, Law BK, Tang CN, Yang GP, *et al.* Spontaneous rectus sheath hematoma. Can J Surg 2003;46:390.
5. Maharaj D, Ramdas M, Teelucksingh S, Perry A, Naraynsingh V. Rectus sheath haematoma: A new set of diagnostic features. Postgrad Med J 2002;78:755-6.
6. Kapan S, Turhan AN, Alis H, Kalayci MU, Hatipoglu S, Yigitbas H, *et al.* Rectus sheath hematoma: Three case reports. J Med Case Rep 2008;2:22.
7. Costello J, Wright J. Rectus sheath hematoma, 'a diagnostic dilemma. Emerg Med J 2005;22:523-4.
8. Casey RG, Mahmoud M, Carroll K, Hurley M. Rectus Sheath hematoma: An unusual diagnosis. Ir Med J 2000;93:90-2.

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