ISO 9001 - 2015

ISSN 2349 - 4891

Monthly

IJRRAS

IF
4.665

Volume 4,Issue 3, March 2017

International Journal of

Recent Research and Applied Studies

SURRAGH PUBLICATIONS

ISSN: 2349 - 4891

International
Journal of Recent Research and Applied Studies
(Multidisciplinary Open Access Refereed e-Journal)

Rectus Sheath Hematoma: The Association between Anticoagulation Therapy and Spontaneous Bleeding

Tabeer Shaikh, Dr. Nabil Badro MD &Ahmed Al-Jehani

Aureus University School of Medicine, Wayaca 31C, Oranjestad, Aruba.
Baltimore Washington Medical Center, 301 Hospital Drive, Glen Burnie, MD 21061.

Received 19th February 2017, Accepted 15th March 2017

Abstract

Rectus sheath hematoma is characterized by the presence of blood within the rectus abdominus muscle sheath. The most common factors that precipitate the condition are direct trauma, strenuous straining (e.g coughing, exercise, vomiting) and anticoagulants. Spontaneous bleeding, particularly Rectus Sheath Hematoma, is a side effect of anticoagulation therapy. The condition should be considered as one of the differentials when evaluating patients on anticoagulation therapy who present with acute abdomen.

Keywords: Rectus Sheath Hematoma, Therapy, Spontaneous Bleeding.

Introduction

Spontaneous bleeding is a common and serious side effect seen in patients on anticoagulation therapy. The occurrence of spontaneous Rectus Sheath Hematoma (RSH) in conjunction with anticoagulant use is increasing in frequency as novel anticoagulants become more available

Case

A 60-year-old Caucasian male presented to the Emergency Room with right upper quadrant pain for one-week duration. Patient's vital signs upon arrival were BP 182/119, Pulse 70, Temperature 36.8 C, Respiratory rate 20, Height 177.8 cm, and Weight 108.9 kg. Upon physical examination, patient was noted to be diaphoretic with a distended abdomen that was tender to deep palpation, particularly in the right upper quadrant. Hemoglobin was measured to be 13.4 while the Hematocrit was 40.2. Patient's past medical history includes Hypertension, Aortic valve replacement, Abdominal Aortic Aneurysm repair and Atrial Fibrillation on oral Warfarin 5 mg. Patient is also an active smoker with a 20-pack year smoking history. CT scan with IV contrast of the abdomen and pelvis were performed. Patient's CT of abdomen showed a 7 x 11 x 17 cm hematoma located in the mid-right rectus muscle.

The right inferior epigastric artery was detectable along the anterior periphery of the hematoma to the level of the active extravasation of the contrast material while the right superior epigastric artery was difficult to detect.

Patient's CT of pelvis (Figure I) showed an 8 x 5 x 4 cm defined hematoma along the anterior inferior extraperitoneal fat superior to the pubic symphysis. Patient's INR was found to be 2.3 which was then reversed with 5 mg of vitamin K IV and 2 units of Fresh Frozen Plasma. Coagulopathy reversal in a timely fashion is an important step in management[1]. Vascular surgery was called for consult and recommendation for Interventional Radiology was discussed. Upon admission to the Intensive Care Unit, the patient received 100 mcg Fentanyl IV for worsening abdominal pain and a one unit PRBC transfusion due to his low H&H. The plan for Transcatheter Therapeutic Embolization with Angiogram was discussed with the patient as well as the risks and benefits. Under local anesthesia, a 5-French sheath was introduced into the right common femoral artery. Next, catheters were used to select the right superficial epigastric artery, which was the presumed artery to have been bleeding seen on the CAT scan. Due to prolonged manipulation, a 5-PRO French sheath was introduced into the left common femoral artery. Once an SOS catheter was positioned above the aortic bifurcation, an angiogram was performed to verify the location and appearance of the iliac vessels for contralateral approach to the right superficial epigastric artery. A catheter was introduced again into the right common femoral artery and by manipulation; the origin of the right superficial epigastric artery was engaged. Another catheter was used to select the main branch of the right superficial femoral artery and embolization with gelfoam sludge was performed. Follow-up injection showed no additional contrast extravasation. Once both sheaths were removed, full hemostasis was attained. The procedure was successful without any complications. The patient was

Correspondence
Tabeer Shaikh
E-mail: tabby.shaikh@gmail.com

monitored overnight without any events. He was cleared to restart warfarin without bridging, as his H&H had remained stable. The patient was discharged on a low salt, low fat diet and was informed to limit his strenuous activity. He was prescribed Percocet 5-325 mg for pain. Patient was also advised to follow up with his primary care physician and have his INR value checked 3 days post discharge.

Figure I
CT of Pelvis depicting the hematoma

Discussion

The increasing use of anticoagulation therapy has increased the incidence of spontaneous Rectus Sheath Hematoma (RSH). It is important for one to have a high index of suspicion for diagnosis as RSH symptoms are vague and can mimic other causes of acute abdomen.[2] The most common factors that precipitate the condition include chronic abdominal straining (including defecation, coughing, vomiting, strenuous exercise, and stretching), hypertension, iatrogenic injury during laparoscopy, blood dyscrasias, pregnancy, collagen vascular disorders, degenerative muscle diseases, direct trauma, previous surgery, and anticoagulant usage.[34] In one study that examined ten patients with spontaneous RSH, anticoagulant or antiplatelet use was the leading cause of RSH[5]. We believe anticoagulant use was also the cause of our patient's RSH.Approximately 1.5–2% of unexplained acute abdomen in hospitalized patients is a result of RSH. However, the proliferation of anticoagulant usage may cause an increase in RSH cases[6]. Due to common medical practice, physicians place emergency-related cases (such as incarcerated bowel, pancreatitis, or appendicitis) at the top of their differential lists for patients presenting with acute abdominal pain. As a result, RSH is often underdiagnosed and overlooked, especially because it can closely resemble other abdominal emergencies. The misdiagnosis of RSH may lead to increased morbidity and even mortality[7]. In cases in which a patient is on anticoagulant therapy, it is especially important for emergency physicians to be aware that the patient is at risk for RSH and proceeds accordingly. For these patients, mortality rates can reach a staggering 25% due to late diagnoses. The problem is exacerbated by a lack of specific symptoms in patients presenting with RSH as well as an absence of a visible hematoma in some cases[8]. Physicians should be aware of clinical indications such as a fall in hemoglobin in patients with abdominal pain who are at greater risk of developing RSH, such as those patients on anticoagulation therapy. The mass produced by RSH does not usually cross the midline and is palpable when tensing the muscles of the abdominal wall (known as Fothergill's sign)[9]. Reversal of coagulopathy is paramount to management of RSH. Conservative treatment is often appropriate for most RSH cases[10]. However, management of RSH will vary with the degree of anticoagulation, hemodynamic status, and actual size of the hematoma[11]. When reversal of coagulopathy is not successful, coil or gel foam embolization has been an effective form of management as seen with our patient[12].

Conclusion

Without swift diagnosis and proper management of rectus sheath hematoma, consequences such as abdominal compartment syndrome can occur. Emergency physicians should consider RSH as a potential cause of acute abdominal pain, especially in the presence of anticoagulation therapy. Proper diagnosis and timely management of RSH can significantly improve the outcome for patients.

References

1. Alla VM, Karnam SM, Kaushik M, Porter J. Spontaneous Rectus Sheath Hematoma [Internet]. Western Journal of Emergency Medicine. Department of Emergency Medicine, University of California, Irvine School of Medicine; 2010 [cited 2016Dec27]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2850860/
2. Aktürk OM, Kayılıoğlu SI, Aydoğan İ, Dinç T, Yildiz B, Cete M, et al. Spontaneous Rectus Sheath Hematoma: an Overview of 4-Year Single Center Experience [Internet]. The Indian Journal of Surgery.Springer India; 2015 [cited 2017Jan4]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4775628/
3. Alla VM, Karnam SM, Kaushik M, Porter J. Spontaneous Rectus Sheath Hematoma [Internet]. Western Journal of Emergency Medicine. Department of Emergency Medicine, University of California, Irvine School of Medicine; 2010 [cited 2017Jan4]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2850860/
4. Aktürk OM, Kayılıoğlu SI, Aydoğan İ, Dinç T, Yildiz B, Cete M, et al. Spontaneous Rectus Sheath Hematoma: an Overview of 4-Year Single Center Experience [Internet]. The Indian Journal of Surgery. Springer India; 2015 [cited 2017Jan4].

Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4775628/
5. Stillman K, Kellar J. Rectus Sheath Hematoma: An Unfortunate Consequence of Novel Anticoagulants [Internet]. Western Journal of Emergency Medicine. Department of Emergency Medicine, University of California, Irvine School of Medicine; 2015 [cited 2017Jan4]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4427215/
6. Alla VM, Karnam SM, Kaushik M, Porter J. Spontaneous Rectus Sheath Hematoma [Internet]. Western Journal of Emergency Medicine. Department of Emergency Medicine, University of California, Irvine School of Medicine; 2010 [cited 2017Jan4]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2850860/
7. Stillman K, Kellar J. Rectus Sheath Hematoma: An Unfortunate Consequence of Novel Anticoagulants [Internet]. Western Journal of Emergency Medicine. Department of Emergency Medicine, University of California, Irvine School of Medicine; 2015 [cited 2017Jan4]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4427215/
8. Alla VM, Karnam SM, Kaushik M, Porter J. Spontaneous Rectus Sheath Hematoma [Internet]. Western Journal of Emergency Medicine. Department of Emergency Medicine, University of California, Irvine School of Medicine; 2010 [cited 2017Jan4]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2850860/
9. Alla VM, Karnam SM, Kaushik M, Porter J. Spontaneous Rectus Sheath Hematoma [Internet]. Western Journal of Emergency Medicine. Department of Emergency Medicine, University of California, Irvine School of Medicine; 2010 [cited 2017Jan4]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2850860/
10. Stillman K, Kellar J. Rectus Sheath Hematoma: An Unfortunate Consequence of Novel Anticoagulants [Internet]. Western Journal of Emergency Medicine. Department of Emergency Medicine, University of California, Irvine School of Medicine; 2015 [cited 2017Jan4]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4427215/
11. Alla VM, Karnam SM, Kaushik M, Porter J. Spontaneous Rectus Sheath Hematoma [Internet]. Western Journal of Emergency Medicine. Department of Emergency Medicine, University of California, Irvine School of Medicine; 2010 [cited 2017Jan4]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2850860/
12. Alla VM, Karnam SM, Kaushik M, Porter J. Spontaneous Rectus Sheath Hematoma [Internet]. Western Journal of Emergency Medicine. Department of Emergency Medicine, University of California, Irvine School of Medicine; 2010 [cited 2017Jan4]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2850860/