Section: Surgery

Case Report

A RARE CASE OF SPONTANEOUS RETROPERITONEAL HEMATOMA PRESENTING WITH ACUTE ABDOMINAL PAIN

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Corresponding Author:
Dr. Hayam Almadani,
Email: almdanihayam@gmail.com

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Hayam Al Madani, Ahmed Al Qarni, Razan Sultan Al-Hufayyan, Hani Alasmari, Khalid Bakri

Asser Central Hospital, Abha, Kingdom of Saudi Arabia.

ABSTRACT

Spontaneous retroperitoneal hematoma (SRH) is a rare but potentially life-threatening condition, often occurring in the absence of trauma or anticoagulant use. It poses a diagnostic challenge due to its non- specific presentation and potential for rapid clinical deterioration. We report the case of a Saudi Patient who presented with acute abdominal pain, hypotension, and a progressive drop in hemoglobin levels. There was no history of trauma, anticoagulant therapy, or known bleeding disorders. Imaging revealed a large retroperitoneal hematoma. The patient was initially managed conservatively with fluid resuscitation and close monitoring. However, due to hemodynamic instability, selective transcatheter arterial embolization was performed, leading to clinical stabilization. SRH can mimic other intra-abdominal emergencies and should be considered in patients presenting with unexplained abdominal or flank pain and signs of internal bleeding. Early diagnosis through imaging and individualized management—ranging from conservative therapy to surgical or interventional radiologic approaches—are crucial to improving outcomes. This case underscores the importance of a high index of suspicion for SRH in non-traumatic abdominal emergencies. Prompt imaging and multidisciplinary management are essential to reduce morbidity and mortality.

INTRODUCTION

Bleeding into the retroperitoneal area without trauma or iatrogenic manipulation is known as spontaneous retroperitoneal hematoma (SRH). Blood buildup inside the rectus sheath causes rectus sheath hematoma (RSH). Although uncommon, these disorders have the potential to resemble several acute intra-abdominal diseases, raising concern and necessitating diagnostic testing and treatment.[1]

Early diagnosis and treatment are crucial for the potentially fatal clinical disease known as spontaneous retroperitoneal hematoma (SRH). It has always been characterized as a side effect of anticoagulant therapy. However, there are also instances in non- anticoagulated individuals (NAC) who have risk factors such coagulopathy, dialysis, neoplasms, vasculitis, or spontaneous or iatrogenic blood vessel rupture. The prevalence of SRH may be rising as a result of the general population's aging, chronic illness, or increased usage of anticoagulants to treat atrial fibrillation. [2,3]

In most of the studies the exact mechanisms and etiologies causing SRH are unknown. The most frequent cause of SRH, accounting for 57–73% of cases, is tumors, including renal cell carcinoma and angiomyolipoma.[3] However, SRH as a tumor consequence is not very common overall. It only happens in 0.3–1.4% of cases of renal cell carcinoma, however depending on the size of the tumor, it happens in 13–100% of cases of angiomyolipoma. SRH has also been linked to adrenal myelolipoma, pheochromocytoma, and adrenal hemangiomas.[4] he incidence of SRH in patients with renal cell carcinoma who receive therapeutic anticoagulation and dialysis ranges from 0.6% to 6.6%, 0.9%, and 0.3% to 1.4%, respectively. However, among people without these symptoms, SRH is extremely uncommon. [5,6]

We reported a successful instance of SRH in a 35-year-old patient that resulted who visited with an unstable hemodynamic status that was successfully managed via conservative treatment with close monitoring. The patient was treated conservatively with careful observation and additional Abdominal pain subsided as his condition steadily improved, and he was then discharged.

CASE PRESENTATION

A 35-year-old male presented to the emergency department with a sudden onset of severe, sharp

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abdominal pain localized to the left side. The pain was described as stabbing in character, gradually intensifying over time, and remained non-radiating. He did not report any accompanying symptoms such as nausea, vomiting, fever, altered bowel habits, or urinary complaints.

The patient had no prior medical or surgical history and was not on any regular medications. The only significant risk factor identified was a long-standing history of heavy smoking. On clinical examination, the patient was fully conscious, alert, and oriented. He appeared to be in significant discomfort due to the abdominal pain. Vital signs were within normal limits, except for mild tachycardia. Abdominal examination revealed localized tenderness on the left side without guarding, rebound tenderness, or signs of peritoneal irritation. Bowel sounds were normal.

Initial management involved intravenous fluid resuscitation and analgesia, which provided partial symptomatic relief. Baseline laboratory investigations, including complete blood count, renal and liver function tests, serum amylase and lipase, and inflammatory markers, were within normal ranges. Serial blood tests showed stable hemoglobin and hematocrit levels with no evidence of internal bleeding.

A plain abdominal X-ray did not reveal any abnormalities. To further evaluate the cause of pain, a contrast-enhanced CT scan of the abdomen was performed, which was unremarkable and showed no signs of acute intra-abdominal pathology. The patient was admitted for close observation and managed conservatively.

Over a four-day hospital stay, his symptoms gradually resolved, and he remained clinically stable throughout. He was discharged in good condition with recommendations for outpatient follow-up and smoking cessation support.

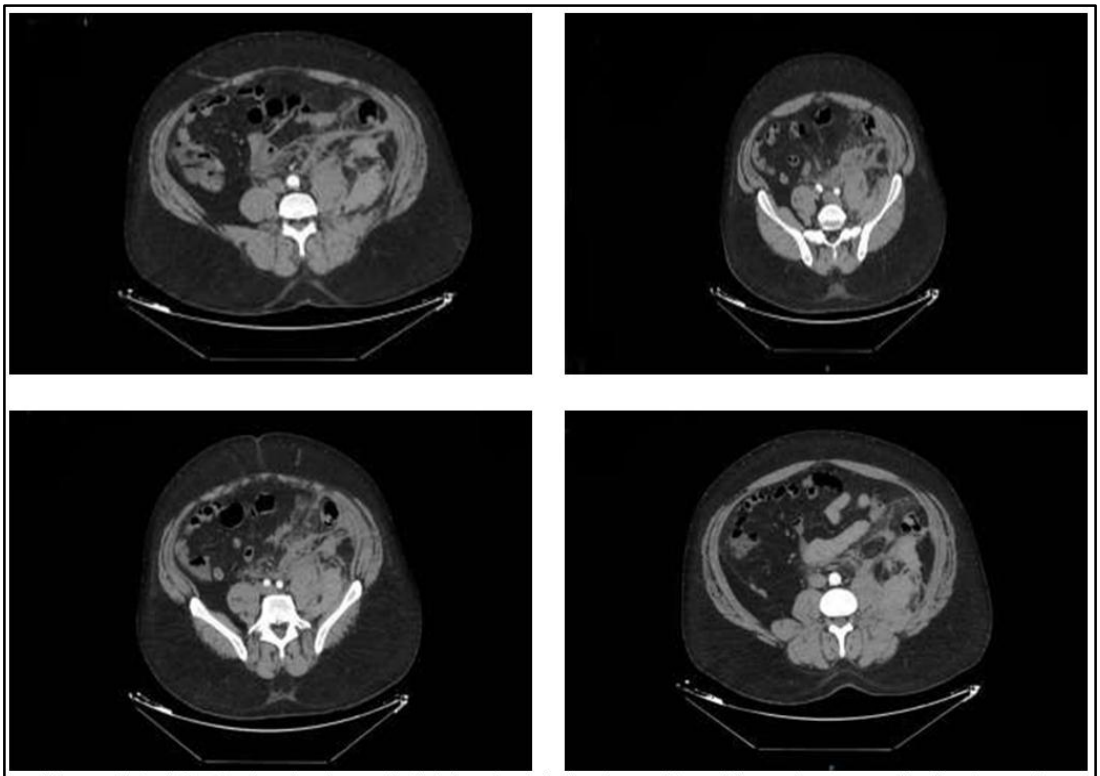

Figure (1A–1D): Contrast-enhanced CT showing a left retroperitoneal hematoma near the lumbar vein without evidence of active bleeding.

DISCUSSION

We reported a case of spontaneous retroperitoneal hematoma in a 35-year-old patient who presented with hemodynamic instability and was successfully managed conservatively. His condition gradually improved, and he was discharged in stable condition. Untriggered bleeding in the retroperitoneal area is a rather uncommon clinical condition known as SRH. SRH typically affects those who are taking anticoagulants. Nevertheless, neither anticoagulant nor antiplatelet drugs were being taken by our patient.[5-7]

Shock, non-pulsating abdominal mass, and Lenk triad abdominal pain are the usual clinical signs of SRH. The location, frequency, and severity of the bleeding determine the type of stomach pain. Severe abdominal distension, anemia, and abdominal compartment syndrome are caused by hematoma expansion, which raises abdominal pressure when a prolonged retroperitoneal hemorrhage develops. Movement problems, paresis, and pain in the lower

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limbs and buttocks are all symptoms of a hematoma compressing the femoral nerve.[8,9]

Spontaneous retroperitoneal hematoma (SRH) refers to the sudden rupture of retroperitoneal blood vessels without an obvious cause. Although the exact etiology remains unclear, it is often associated with underlying vascular conditions such as hypertension and atherosclerosis. Other contributing factors may include congenital vascular anomalies, abnormal vessel development, pregnancy, and hormonal influences. In the present case, the patient had a significant history of heavy smoking, which may have played a contributory role.[10,11]

CT revealed a low-density area in the central and left retroperitoneal space, with no evidence of active bleeding or aneurysm. MRI showed heterogeneous signal intensity—low on T1 and high on T2—consistent with a hematoma. Based on these findings, a diagnosis of spontaneous retroperitoneal hematoma was made, and no surgical intervention was required.[12]

CONCLUSION

Spontaneous retroperitoneal hematoma (SRH) can be managed through conservative treatment, transcatheter arterial embolization, or surgery. Due to its high mortality rate, timely and accurate evaluation is essential to guide treatment decisions. Clinicians should consider SRH in cases of unexplained hemoglobin drop, especially when accompanied by renal or acute left heart failure. Early bleeding risk assessment and prompt intervention are critical in suspected cases.

For critically ill patients, interventional therapy should be prioritized over surgery. A multidisciplinary team (MDT) approach with strong interdepartmental coordination enhances treatment outcomes. Further research is needed to improve understanding of SRH's causes, diagnosis, and management.

REFERENCES

1. Kurotaki T, Okada N, Sakurai Y, Yamabuki T, Takada M, Kato K, Yokoyama T, Ambo Y, Kinoshita Y, Nakamura F, Kashimura N. Spontaneous retroperitoneal hematoma: a case report. J Med Case Rep. 2023 Feb 28;17(1):70. doi: 10.1186/s13256-023-03794-4. PMID: 36849897; PMCID: PMC9972597.
2. Chan YC, Morales JP, Reidy JF, Taylor PR. Management of spontaneous and iatrogenic retroperitoneal haemorrhage: management, endovascular intervention or open surgery? Int J Clin Pract 2007;62(10):1604–1613. doi: 10.1111/j.1742-1241.2007.01494.x.
3. Phillips CK, Lepor H. Spontaneous retroperitoneal hemorrhage caused by segmental arterial mediolysis. Rev Urol. 2006;8(1):36–40.
4. Murphy SJ, Werring DJ. Stroke: causes and clinical features. Medicine (Abingdon). 2020 Sep;48(9):561- 566. doi: 10.1016/j.mpmed.2020.06.002. Epub 2020 Aug 6. PMID: 32837228; PMCID: PMC7409792.
5. Daliakopoulos SI. Spontaneous retroperitoneal hematoma: a rare devastating clinical entity of a pleiada of less common origins. J Surg Tech Case Rep. 2011 Jan;3(1):8-9. doi: 10.4103/2006-8808.78462. PMID: 22022645; PMCID: PMC3192510.
6. ACOG technical bulletin number 143. Washington DC: American College of Obstetricians and Gynecologists; 1990. Diagnosis and management of postpartum hemorrhage.
7. Mondie C, Maguire NJ, Rentea RM. Retroperitoneal Hematoma. [Updated 2024 Jun 7]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/sites/books/NBK558928
8. Han, Ruo-Dong; Yan, Xiu-Xia. A case report on spontaneous retroperitoneal hemorrhage. Chinese Medical Journal 134(14):p 1750- 1752, July 20, 2021. DOI: 10.1097/CM9.0000000000001278
9. Diaz JR, Agriantonis DJ, Aguila J, Calleros JE, Ayyappan AP. Spontaneous perirenal hemorrhage: what radiologists need to know. Emerg Radiol 2011; 18:329– 334. doi: 10.1007/s10140-011-0944-9.
10. Sunga KL, Bellolio MF, Gilmore RM, Cabrera D. Spontaneous retroperitoneal hematoma: etiology, characteristics, management, and outcome. The Journal of Emergency Medicine. 2012 Aug;43(2):e157–e161. doi:10.1016/j.jemermed.2011.05.03
11. Berntorp E, Shapiro AD. Modern haemophilia care. Lancet. 2012;379(9824):1447–1456. doi: 10.1016/S0140-6736(11)61139-2.
12. Ekici Y, Aydogan C, Yagmurdur MC, Kirnap M, Harman A, Moray G, et al. Treatment approaches for spontaneous retroperitoneal bleeding. Int Surg 2009;94(2):171–175.

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