

Spontaneous Hemoperitoneum: A Rare Cause of Acute Abdomen

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Abstract: *Spontaneous hemoperitoneum is a rare cause of acute abdominal pain, determined by collection of blood inside peritoneum. It may manifest with heterogeneous clinical presentation, mimicking other more severe entities responsible for acute abdominal pain, causing a diagnostic dilemma for surgeons. CT represents the gold standard technique for evaluation of patients with indeterminate acute abdominal pain. Earlier identification of this condition with the help of radiological modalities has led to the avoidance of exploratory laparotomy. Here I present a case of spontaneous hemoperitoneum which was seen in our institute. the case was managed conservatively.*

Keywords: Spontaneous hemoperitoneum, diagnostic dilemma

1. Introduction

Spontaneous hemoperitoneum is an uncommon clinical condition resulting in derangement of the coagulation profile that lead to localised abdominal pain. There is a small collection of blood. Usually it has a smooth clinical scenario after a correct diagnosis the wakefulness of the clinical presentation usually accounts for the difficulty of diagnosing this pathology. Radiological studies have a valuable role in reaching the right diagnosis and sparing the patient from unnecessary hospitalization or surgery in uncomplicated cases. Here we present the case of spontaneous hemoperitoneum which was successfully managed conservatively with conservative approach.

2. Case

A 24 year old patient a homemaker belonging to lower socio economic class reported to us with the complaint of lower abdominal pain localised to lower abdomen non radiating in nature along with intermittent vomiting for 2 days with no other constitutional symptoms.

The patient had undergone multiple blood product transfusion in past 2 months [4 pint FFP and 2 pint pcv]

The patients family, social and personal history has no other contributory findings. the pain got aggravated on walking and eating food.

The pain was associated with vomiting for one day. There were 2 to 3 episodes containing food particles non projectile non bilious associated with excessive nausea.

No history of trauma, fever, diarrhea, Constipation, abdominal distension, hematemesis, hematuria Or burning micturition.

On examination

No visible or palpable lump noted over abdomen

On palpation mild tenderness noted just below the umbilicus or pubic region

No guarding or rigidity was found.

All hernia sites were normal.

Blood investigations

Hemoglobin 5.8 gm/dl

Platelet count 2.9 4 lakhs per cubic metre

PT more than 120 seconds

aPPT more than 180 seconds

INR 1.5

CT more than 11 minute

BT 6 minutes 40 seconds

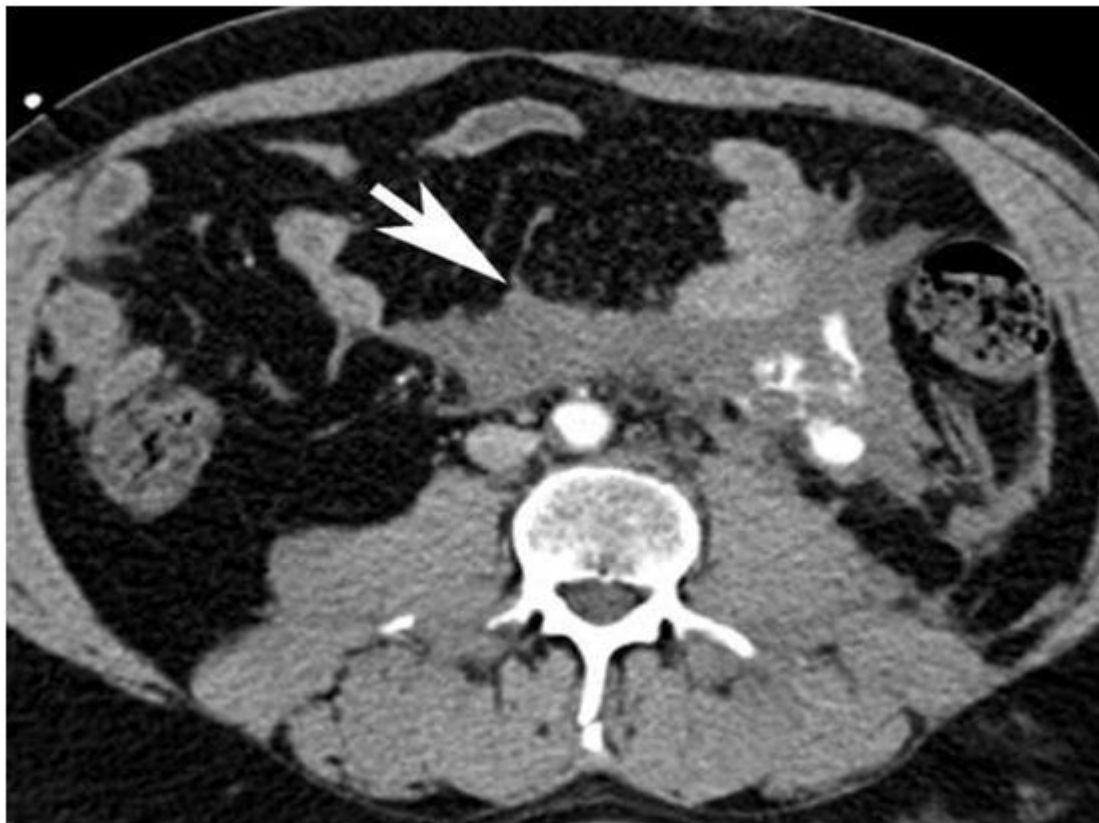
Bilirubin total 4.52gm/dl

Bilirubin indirect 3.42gm/dl

Expert PS: predominantly hypochromic microcytic anisopolikilocytosis with leptocytes. Severe hypochromic microcytic anemia with thrombocytopenia

USG: - hemoperitoneum likely

CECT: -



CECT abdomen with pelvis showing hemorrhagic collection intra - peritoneum marked by arrow. After careful correlation among clinical, radiological and laboratory findings, diagnosis of spontaneous hemoperitoneum in known case of hypofibrinogenemia was made.

The patient was managed conservatively with infusion of FFP and PCV.

Injection tranexamic acid one ampule IV 8 hourly

Injection vitamin K1 ampule IV OD

Injection Botrophase one ampule 8 hourly IV

The patient recovered completely sign symptoms got relieved after one week. The patient was discharged on Hemanitic for 3 months tranexamic acid one weekly.

Regular followup for next 6 months and with no fresh complaints

3. Discussion

Spontaneous hemoperitoneum is an uncommon cause of acute abdominal pain. When it occurs, it may be catastrophic. There are a myriad of causes for spontaneous hemoperitoneum and an underlying cause should always be looked for if the patient survives the initial event. This article describes the imaging findings of spontaneous hemoperitoneum and discusses the relative merits of multiple imaging modalities used for the diagnosis of the hemoperitoneum and an underlying cause. In addition, we outline the etiology of spontaneous hemoperitoneum, which

includes hepatic, splenic, gynecologic, and vascular causes, and bleeding disorders.

The first goal of imaging is to detect the hemoperitoneum. Localizing the source of the bleeding is the next step. Elucidating a potential underlying cause is the third requirement of imaging. CT is generally the first line imaging modality in the evaluation of patients presenting with abdominal pain. Sonography has a role in this patient population, particularly in patients presenting to the emergency room with severe abdominal pain and signs suggesting hemodynamic instability.

Hepatic Causes of Spontaneous Hemoperitoneum

Spontaneous rupture of a previously undetected liver lesion, although rare, is the most frequently reported etiology of spontaneous hemoperitoneum. Occasionally, minor trauma may be a precipitating factor.¹ Pregnancy is also associated with an increased risk of spontaneous rupture of some liver lesions.² Hepatic causes of spontaneous hemoperitoneum include rupture of both benign and malignant hepatic masses. Benign masses that may rupture include hepatic adenomas^{1, 2 3 4} and, rarely, giant

Splenic Causes of Spontaneous Hemoperitoneum

Delayed splenic rupture may occur following blunt abdominal trauma. Spontaneous rupture of the spleen, however, is extremely rare. Many of the reports in the literature on spontaneous splenic rupture are indeed case reports. Unlike the liver, spontaneous splenic rupture is rarely associated with parenchymal splenic masses. When it occurs, it is most frequently associated with splenic infection and these infections include cytomegalovirus,⁵ malaria, and Epstein-Barr virus. Disseminate

Vascular Causes of Spontaneous Hemoperitoneum

There is a wide range of vascular causes of spontaneous hemoperitoneum. These may be divided into arterial causes and venous causes. Arterial causes are either due to rupture of an abnormal vessel or a normal vessel undergoing stress. Causes of arterial hemoperitoneum due to abnormal vessels include aneurysm (Fig 7), pseudo - aneurysm (Fig 8), or mycotic aneurysm (Fig 9) with rupture and arterial dissection with rupture. These are not necessarily large vessels as would be expected in patients

Coagulopathic Causes of Spontaneous Hemoperitoneum

Spontaneous hemorrhage is a risk of anticoagulation. This most frequently results in spontaneous hemorrhage into the psoas or rectus abdominis muscles even in the absence of trauma, usually in the first few weeks of anticoagulant therapy. Anticoagulation, however, may occasionally result in spontaneous hemoperitoneum. This may be directly into the peritoneum or result in hemorrhage into the bowel wall with secondary hemoperitoneum. The event may be associated with either heparin (Fig 12) or

Gynecologic Causes of Spontaneous Hemoperitoneum

Spontaneous hemoperitoneum occurs more frequently in pregnancy than in the nonpregnant population. In addition to pregnancy, there are a variety of gynecologic conditions that may result in hemoperitoneum. Ovarian cyst rupture may result in hemoperitoneum.⁴⁶ This is the most common cause of hemoperitoneum in young females. Sonography can usually identify fluid in the peritoneal cavity but it may be difficult to determine if the fluid is blood. In addition, sonography may not identify the cyst

4. Conclusion

Spontaneous hemoperitoneum is uncommon cause of hemoperitoneum with veg clinical presentation that requires blood investigations including coagulation profile and USD and sometimes with an ambiguous clinical presentation CT imaging is recommended to correlate blood picture with clinical presentation and previous history with imaging. To avoid unnecessary operative intervention where the patient can be managed conservatively.

References

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