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Splenic Peliosis a Unique Case of Spontaneous Rupture

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Patient: *Female, 29 -year-old*

Final Diagnoses: *Laparotomy, Splenic Peliosis, Hemoperitoneum, Hemorrhagic Shock, Rupture Spleen,*

Clinical Procedure: *Laparotomy*

Specialty*: Pulmonology, Critical Care, Surgery*

MeSH Keywords: *Splenic Peliosis, Laparotomy, Hemoperitoneum, Cyst Like Cavities, Rupture Spleen, Adult, Female, Rupture Spontaneous, Splenic Diseases, Vascular Disease, Splenectomy.*

Introduction

Splenic Peliosis is a disease characterized by blood filled cystic cavities within the parenchyma organs [1]. Peliosis is derived from the Greek word "Pelios" which means "blue- black" and these lesions were discovered on the cut surface of the liver in 1861 by Wagner. It is thought mononuclear phagocytic system, such as the liver, spleen, bone marrow and lymph nodes is where peliosis develops but has also been described in the kidneys, lungs and parathyroid glands [3]. Isolated splenic peliosis has not been reported before 1978 and it was more commonly to occur in association with peliosis hepatis. [2] The pathogenesis of hepatic peliosis has been hypothesized to occur due to loss of hepatic microvasculature integrity because of congenital malformation in the vessel's disruptions to the microcirculation. [4] We report on a 29-year-old female with isolated splenic peliosis with spontaneous rupture and initially presenting as hemoperitoneum.

Case summary

This is a 29 year old Caucasian female who presented to the emergency room for acute onset abdominal pain. The patient began to have abdominal pain that was in the lower abdomen with radiation to bilateral inferior pelvic areas. She denied history of recent trauma, anabolic steroid use, or recent weight loss. From her clinical history, she has 2 healthy children and stated she does have a levonorgestrel releasing 52mg intrauterine device but denied being on oral contraceptives. Her last menstrual period was unknown, since she had an intra uterine device, and her periods were inconsistent. Past surgical history

is significant for cholecystectomy and past medical history was asymptomatic thyroid nodule. Pertinent physical examination was significant for tenderness in right and left lower quadrants.

Blood investigations showed potassium 4. mmol/L, sodium 135 mmol/L, creatinine .86 mg/dl, ALT 28 U/L, AST 26 U/L, alkaline phosphatase 76 U/L. White blood cells 16.9 K/CUMM and red blood count 4.02 M/CUMM and hemoglobin 12.4 g/dl, hematocrit 35.9 %. Platelet count 314 K/CUMM. Her HCG quantitative <1mIU/ml(range < 5mIU/mL), therefore pregnancy was less likely.

On CT abdomen and pelvis, there was concern for a hemorrhagic left ovarian cyst with a moderate amount of hemorrhage throughout the peritoneal cavity. Based on this history and physical examination she was transferred to tertiary care for evaluation of intra-abdominal pathology likely due to a large left hemorrhagic ovarian cyst. Recommendation for laparoscopy of presumed hemorrhagic ovarian cyst and secondary hemoperitoneum. The patient underwent a diagnostic laparoscopy, in the operating room no pelvic pathology was identified but the surgeon noted significant amounts of hemoperitoneum emanating from the upper abdominal anatomy. Laparoscopy then converted to an exploratory procedure with Kocherization of duodenum and takedown of splenic flexure and open splenectomy.

The pathological findings were consistent with splenic peliosis. The patient tolerated the surgical procedure well and was discharged home.

Discussion

Splenic peliosis is found to be associated with chronic debilitating conditions and spontaneous rupture leading to hemoperitoneum has been reported in literature [6]. Isolated peliosis complicated by spontaneous rupture with resulting intraperitoneal hemorrhage can be fatal. Our patient was not on oral contraceptive pills, anabolic steroids, nor did she have significant chronic conditions based on history such as diabetes or renal insufficiency. On blood work

HIV 1/2 Ab/ HIV AgQl was non-reactive, Hepatitis panel B/ C was negative, Serum protein electrophoresis was not significant which made myeloma unlikely. Quantiferon and Tb gold test was negative. Parvovirus B19 Ab IgM was not elevated.

Radiological evidence was misleading and splenic rupture was identified on exploratory laparotomy. On finding the ruptured spleen, splenectomy was undertaken as a lifesaving treatment [5].

Post splenectomy pathological study revealed acute splenitis with focal capsular disruption and fibrin. Splenic parenchyma with red pulp congestion and splenic hilum with focal hemorrhage by which patients' diagnosis of peliosis was confirmed.

Conclusion

This is a rare case because splenic peliosis with spontaneous hemorrhage presented as suspicion for hemorrhage of ovarian cyst and spontaneous rupture. These patients are usually asymptomatic however incidental rupture may result in fatal outcomes if not identified early.

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