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CASE REPORT

Spontaneous Rupture of Splenic Hemangioma in a Neonate

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ABSTRACT

Spleen vascular tumors such as hemangiomas, albeit rare, can present during neonatal period with unexplained circulatory shock. We present a case of a newborn with refractory hypovolemic shock and acute abdomen that underwent emergency splenectomy due to spontaneous rupture of a splenic hemangioma.

Key words: Hemangioma; Benign splenic tumor; Circulatory shock; Rupture

CASE REPORT

A 24-day-old male baby presented to us with acute abdomen and circulatory shock. The baby was born vaginally to a healthy mother at term after an uneventful prenatal course. Several prenatal ultrasounds were performed and reported as normal. Apart from being small for gestational age (2,385 gr at 40 weeks of intrauterine age), birth and clinical histories were unremarkable and newborn and mother were discharged 24 hours after birth. Before presentation, the patient became suddenly pale, vomited once and was treated by his pediatrician with antiemetic drugs, lactobacilli and simethicone with slight clinical improvement. A few hours later, he again became irritable and taken to the referring hospital, where he was found to have signs of shock; he received red blood cell and fresh frozen plasma transfusions, respiratory support, and broad-spectrum antibiotics. Given the persistence of hemodynamic instability and tender abdomen, the patient was referred to our hospital suspecting bowel perforation. The patient was pale, with tender abdomen but there was no ecchymosis or palpable masses on abdominal examination. Ultrasound abdomen showed abundant free fluid. The caregivers categorically denied abdominal trauma or falls. Emergency laparotomy revealed hemoperitoneum and a laceration of the spleen at its lower pole (Fig. 1). Splenectomy was performed.

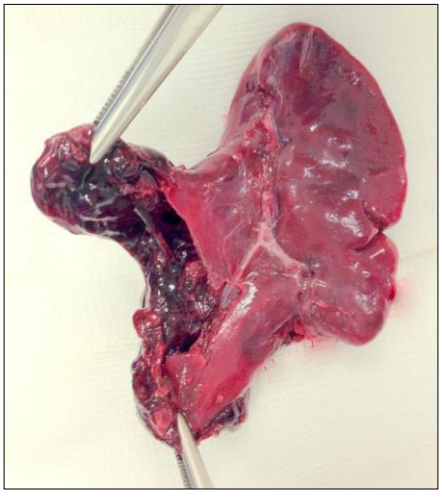

Figure 1: Resected spleen, showing a distorted anatomy and a ruptured lower pole.

Patient slowly recovered from shock and its clinical derangements, and was discharged uneventfully after 10 days. Penicillin was started and immunization against encapsulated agents was given at age 2 months. Histopathology analysis reported a ruptured cavernous hemangioma of the spleen (Fig. 2).

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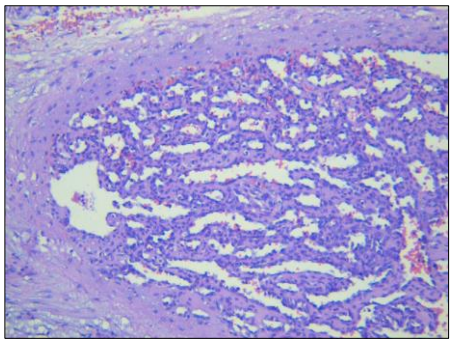

Figure 2: Hematoxylin and eosin slide showing cavernous hemangioma.

DISCUSSION

The spleen can be involved by various conditions such as infectious processes, inflammatory diseases, vascular, or hematologic conditions and neoplasms (benign and malignant). The incidence of splenic hemangioma ranges between 0.02% and 0.16% [1,2]; it is seldom reported in the neonates. It may present as incidental lesions or it may produce significant splenomegaly and predispose to splenic rupture [3]. Other presentations include Kasabach-Merritt phenomenon, portal hypertension,[5] anemia, thrombocytopenia, coagulopathy and bleeding due to sequestration and/or destruction of blood components within the tumor [3]. Splenic hemangioma can have various complications such as splenic thrombosis, infarction, and spontaneous rupture which may be fatal if not dealt emergently [4].

Hypovolemic shock due to abdominal hemorrhage in neonates is very rare and can be caused by obstetric trauma, [6] laceration of umbilical artery during catheterization or unidentified causes [6,7]. Ruptured splenic hemangioma is extremely rare cause of abdominal hemorrhage [7,8]. Regardless of the cause of hemoperitoneum the morbidity and mortality can be very high if not identified and managed timely. Patients with splenectomy are prone to overwhelming infections, therefore, must be vaccinated as soon as possible, particularly against encapsulated microorganisms. In neonates, vaccination should be done at two months to get proper titers of antibodies [9].

To conclude, ruptured vascular malformation of spleen in neonates is very rare entity, and it must be considered when facing a neonate with unexplained shock and acute abdomen.

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