Non-operative Management of Spontaneous Splenic Rupture in Hemophilia

Historically, the treatment of splenic rupture has been splenectomy. With the emergence of splenic conservation in splenic trauma, similar concept has been applied to spontaneous rupture in other conditions. There are only few case reports of isolated splenic rupture in patients with hemophilia managed operatively with splenectomy [1,2]. Here, we describe the successful non-surgical management of an isolated splenic rupture in a child with severe hemophilia A.

A 6-year-old presented with breathlessness, colicky left-sided loin pain followed by feeling of weakness and black stools. There was no history of trauma. His examination revealed pallor, tachypnea, tachycardia, hypotension, and tenderness and guarding to the left hypochondrium. His hemoglobin level was 5.4 g/dL, activated partial thromboplastin time was prolonged, and abdominal ultrasonography revealed a hyperechogenic splenic mass. Patient was administered oxygen, intravenous fluids and blood products in intensive care unit, resulting in normalization of blood pressure and heart rate. Computed tomography of abdomen showed large peripherally enhancing collection 117×76×85 mm in lower pole of spleen with parenchymal thinning suggestive of splenic rupture (***Fig.* 1**). His factor VIII level was <1%. The patient was managed conservatively with repeated blood product transfusions and factor VIII concentrates (50 IU/kg/dose twice/day for first three days), with monitoring of vitals. On day 14, abdominal ultrasound showed reduction in size of hematoma and patient was discharged.

The standard criteria for non-operative management of rupture spleen are hemodynamic stability/readily stabilizable; lack of rebound and guarding; blood transfusions ≥4 units; no lack of consciousness; age <55 years; injury documented on imaging; and complete recovery of bowel movements. The only absolute indication for emergency laparotomy is hemodynamic instability [3]. The benefits of non-operative management are: low morbidity and mortality; preserved spleen; avoidance of laparotomy; minimal blood transfusions; and decreased hospital stay [3]. As our patient was young and hemodynamically stable, we opted for a non-operative management (strict bed rest for 7-14 days, administration of blood and blood products, serial monitoring of hemoglobin and vital parameters). Several reports of successful non-operative management of spontaneous and traumatic splenic bleeds in hemodynamically stable patients have been described [4,5]. The intensive coagulation factor replacement and correction of any other clotting abnormalities are the cornerstones of a successful outcome. Splenic salvage should be the aim in the management of these patients.

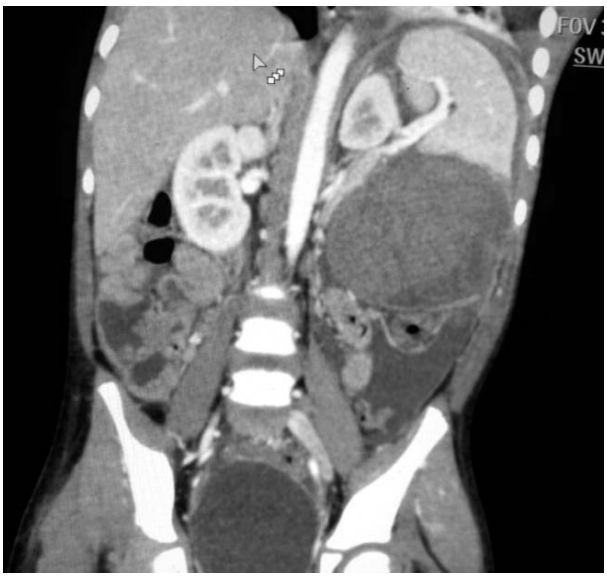

FIG. 1 *CT scan abdomen showing large peripherally enhancing collection (117×76×85) mm seen in lower pole of spleen with internal debris (arrow) communicate to peri-splenic collection with parenchyma thin out up to 2.1 mm.*

Acknowledgements: Dr Manish Parakh and Dr Pawan Dara for providing inputs into manuscript writing.
Funding: None; *Competing interest*: None stated.

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