EDITORIAL

Role of conservative management in Blunt Splenic trauma

Abdominal trauma is one of the commonest causes of mortality and morbidity during the first four decades of life and third commonest cause of death overall.[1] Splenic injury was more commonly seen amongst males then in females.[2] The first splenectomy for a disease process was performed in 1549 by Adriano Zacariolla and that for trauma by Nicholas Mathlas in 1678.[3] Spleen is a highly friable and vascular organ having immunological and haematological functions.[4] This lymphatic organ located under the left rib cage is highly susceptible to injury especially blunt trauma, by virtue of its position and consistency. Road traffic accident are the commonist cause of blunt abdominal trauma.[5]

Blunt splenic trauma occurs when a significant impact to the spleen from some outside source (i.e. automobile accident) damages or ruptures the spleen. Treatment varies depending on severity, but often consists of embolectomy or splenectomy.

Blunt splenic trauma most often occurs in automobile accident victims, in which it is a leading cause of internal bleeding. However, any type of major impact directed to the spleen may cause splenic trauma. This can happen in bicycling accidents, when the handlebar is forced into the left subcostal margin, and into the spleen. The degree of injury ranges from subcapsular hematoma, to splenic rupture.

The primary concern in any splenic trauma is internal hemorrhage, though the exact amount of hemorrhage may be small or large, depending on the nature and degree of injury. Small or minor injuries often heal spontaneously, especially in children. Larger injuries hemorrhage extensively, often causing hemorrhagic shock.

The primary symptom, hemorrhage, presents differently depending on the degree of injury, with the symptoms of major hemorrhage, shock, abdominal pain, and distention being clinically obvious. Minor hemorrhage often presents as upper left quadrant pain. Patients with unexplained left upper quadrant pain, particularly if there is evidence of hypovolemia or shock, are generally inquired regarding any recent trauma. Diagnosis is confirmed with CT, or bedside ultrasound for less stable patients.[6] A set of CT scan grading criteria was created to identify the need for intervention (surgery or embolization) in patients with splenic injury.[7]

The criteria were established using 20 CT scans from a database of hemodynamically stable patients with blunt splenic injury. These criteria were then validated in 56 consecutive patients retrospectively and appear to reliably predict the need for invasive management in patients with blunt injury to the spleen (sensitivity of 100%, specificity 88%, overall accuracy was 93%).[7]

Grade I - III injury of spleen can be managed conservatively. Grade IV and V usually requires surgical intervention. To managed Grade I - III injury on conserative line, we have to keep an eye on this patient constantly by managing these patient in intensive care unit. If further detoriation in clinical signs occur like tachycardia or severe hypotension, the patient may require laparotmy and spleenectomy.

Three CT findings correlate with the need for intervention. Devascularization or laceration involving 50% or more of the splenic parenchyma. Contrast blush greater than one centimeter in diameter (from active extravasation of IV contrast or pseudoaneurysm formation.

A large hemoperitoneum, treatment has traditionally been splenectomy. However, splenectomy is avoided if possible, particularly in children, to avoid the resulting permanent susceptibility to bacterial infections. Most small, and some moderate-sized lacerations in stable patients (particularly children) are managed with hospital observation and sometimes transfusion rather than surgery.

Embolization, blocking off of the hemorrhaging vessels, is a newer and less invasive treatment. When surgery is needed, the spleen can be surgically repaired in a few cases, but splenectomy is still the primary surgical treatment, and has the highest success rate of all treatments.

Dr. Saleem Khan
Editor
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