WHAT IS IT?
The spleen is a spongy, soft organ. It is located in the upper left part of the abdomen and has a number of functions including:

- Production of white blood cells (lymphocytes);
- Filtration of waste products from the blood;
- Destruction of old or damaged red blood cells (erythrocytes);
- Rupture of the spleen is most commonly caused by a severe blow to the abdomen due to serious road or industrial accidents, falls from a height, contact sports, and beatings.
- The spleen is supplied by a large artery, so there is a risk of severe internal bleeding in cases where the spleen is ruptured.

SIGNS AND SYMPTOMS

- Upper left quadrant abdominal tenderness.
- Possible left shoulder tenderness due to irritation of the subdiaphragmatic nerve root.
- Guarding and abdominal rigidity.
- Mild pallor.
- If bleeding exceeds 5–10 per cent of blood volume, clinical signs of early shock may manifest, including tachycardia, tachypnoea, restlessness, and anxiety.

- With increasing abdominal bleeding there may be abdominal distension, peritoneal signs, and overt shock.
- Symptoms of low blood pressure and lack of oxygen include light-headedness, blurred vision, confusion, and fainting – this is a surgical emergency.

DIAGNOSIS

- An abdominal X-ray can exclude other causes.
- Unstable patients suspected of splenic injury and intra-abdominal haemorrhage should undergo exploratory laparotomy and splenic repair or removal.
- Diagnostic peritoneal lavage may be a valuable adjunct if time permits and there are multiple injuries.
- In stable patients (systolic BP>100mmHg, heart rate <120 BPM) a computerised tomography scan is the ideal non-invasive means of evaluating the spleen.
- Ultrasound is useful for examining solid organs and detecting free fluid in the abdomen.

TREATMENT

- Fluid resuscitation.
- Non-surgical treatment is possible in haemodynamically stable patients provided intensive monitoring is available. This involves strict bedrest and blood transfusions as required.
- In many cases the entire spleen is removed (splenectomy) but some ruptures can be surgically repaired.
- Patients should be vaccinated against pneumococcus before a splenectomy whenever possible.

LONG-TERM MANAGEMENT

- Asplenic patients are at increased risk of infections.
- An annual flu vaccination is recommended after a splenectomy.
- In some circumstances prophylactic antibiotics are recommended, particularly if the patient has another condition (sickle-cell disease or cancer, for example) that increases the risk of life-threatening infections.
- Although an asplenic patient’s ability to fight infection is impaired, other organs (primarily the liver) compensate for the loss by increasing their infection-fighting ability.

PRECAUTIONARY MEASURES

The following general measures may help to prevent serious infection in asplenic patients:

- Carry a ‘no spleen’ card that provides details of vaccinations, antibiotic therapy, and action to be taken in case of a flu-like illness;
- Seek urgent medical attention at early signs of infection, irrespective of prophylaxis;
- Take aspirin prophylaxis against thrombosis (this should be controlled by a haematologist);
- Avoid risk of malaria when in tropical countries by using insect-repellent creams, mosquito nets or screens, wearing long sleeves and trousers in the evening, and taking anti-malarial medication.

REFERENCES
