Clinical History:

A 44-year-old male patient with known sickle cell anaemia, was referred to our hospital with fever up to 38°C, upper right quadrant pain, hepatomegaly and meteorism. The patient had a history of splenectomy 20 years ago and cholecystectomy.

Imaging Findings:

An initial ultrasound of the abdomen was performed, which revealed free fluid in the peritoneal cavity, patency of portal vein and inferior vena cava, cholecystectomy, and a mild dilatation of bile duct due to cholecystectomy. Meteorism, fever and pain were attributed by clinicians to acute gastroenteritis. Moreover ultrasound demonstrated splenectomy, hepatomegaly and a hypoechoic unilocular construction at the area of splenic vessels (Fig 1). The lesion had the appearance of a cyst or fluid collection, yet colour Doppler imaging showed internal blood flow. (Fig 2) To better assess the vessel, a MRI-MRA scan was performed: besides confirming the U/S findings, it revealed a dilatation of splenic and portal vein probably due to a shunt between splenic artery and splenic vein, and a splenic vein aneurysm (Figs 3, 4, 5).

Discussion:

An arteriovenous fistula (AVF) is an abnormal communication between an artery and a vein which bypasses the normal capillary bed and shunts blood directly to the venous circulation. They can occur in any area of the body and affect blood vessels of any size. [4] Splenic arteriovenous fistulas are rarely encountered, but they can invoke serious pathophysiological consequences. [2] Splenic arteriovenous fistula (SAVF) can be either congenital or acquired. Congenital SAVFs usually occur in patients with Ehlers-Danlos or Rendu-Osler-Weber syndrome [3], while acquired SAVFs are secondary to traumatic, iatrogenic or spontaneous lesions. [1] They occur more often in females (80%), particularly the multiparous. Their occurrence in men is likely associated to prior surgery or penetrating trauma. Only 16% of cases had no signs of portal hypertension. [1] Large SAVFs typically cause portal hypertension. [3]. The treatment of AVFs is based on the pathophysiology, the anatomy and the goals of the therapy in each case. In general, the existence of an acquired AVF is an indication for treatment at the time of diagnosis. Treatment can be achieved either by open surgery or endovascular techniques which are particularly
useful for patients who are high-risk open surgical candidates. [4]

Written informed patient consent for publication has been obtained.

**Differential Diagnosis List:** Splenic vein aneurysm, caused by splenic arteriovenous fistula, Splenic artery aneurysm, Left kidney cyst

**Final Diagnosis:** Splenic vein aneurysm, caused by splenic arteriovenous fistula

**References:**

Description: Splenic vein aneurysm. Origin: A. Polanagnostaki, Department of Radiology, AHEPA Hospital, Thessaloniki, Greece.
Description: Splenic vein aneurysm. Origin: A. Polanagnostaki, Department of Radiology, AHEPA Hospital, Thessaloniki, Greece.
Description: An hypoechoic unilocular construction. Origin: A. Polanagnostaki, Department of Radiology, AHEPA Hospital, Thessaloniki, Greece.
Description: Splenic vein aneurysm. Origin: A.Polanagnostaki, Department of Radiology, AHEPA Hospital, Thessaloniki, Greece.
Description: Colour Doppler imaging showed internal blood flow. Origin: A. Polanagnostaki, Department of Radiology, AHEPA Hospital, Thessaloniki, Greece.