Atypical syncope in an adolescent: Harnessing POCUS for early detection of hemoperitoneum in cases of delayed splenic rupture with subtle clinical signs.

Dr.C.Davis Dr.P.Mehta Dr.S.Sutar

Lincoln County Hospital,Lincoln ,United kingdom

Background

Splenic rupture in usually presents with abdominal pain, guarding, and features of haemoperitoneum.However,atypical presentations without abdominal signs can delay diagnosis.We present the case of a 16 year old male ,who experienced a syncopal episode at home, initially suspected to be vasovagal in origin. Syncope as a primary presentation is rare in blunt splenic trauma, especially when there is a delayed presentation and normal initial observations and laboratory results .

Case report

A 16-year-old male presented to the Emergency Department (ED) after a brief syncopal episode at home, occurring after feeling lightheaded in the shower. There was no fall or head injury, and he recovered spontaneously. He denied chest pain, palpitations, abdominal pain, dyspnoea, or neurological symptoms. Past medical history included kyphoscoliosis (post vertebral decompression) and grade 1 Chiari malformation.

Initial observations were stable (BP 109/70 mmHg, HR 92 bpm, SpO_2 100% RA, Temp 36.8°C) and laboratory results were unremarkable except for neutrophilia (WCC 20.4 $\times 10^9$/L). Abdominal examination was soft and non-tender, with no guarding or peritonism, despite underlying haemoperitoneum.

Differentials:
Vasovagal syncope, Arrythmias,Dehydration

On detailed history, he disclosed a minor football injury earlier that day with transient left lower chest discomfort. POCUS performed in the ED revealed free fluid in hepatorenal, splenorenal, and pelvic pouches. CT abdomen confirmed a grade 5 splenic laceration with active bleeding. He was stabilised with IV fluids, tranexamic acid, and blood transfusion, then transferred to a tertiary surgical centre for definitive management.

Discussion

This case illustrates an uncommon cause of syncope in adolescents: hypovolaemia from internal haemorrhage secondary to splenic rupture.

Splenic injury can follow even seemingly minor trauma, particularly in contact sports.

Delayed rupture is a recognized phenomenon, and the absence of external injury should not exclude serious intra-abdominal pathology.

POCUS and thorough history-taking are essential to avoid missed diagnoses of life-threatening intra-abdominal injury especially in atypical presentations with minimal clinical signs.

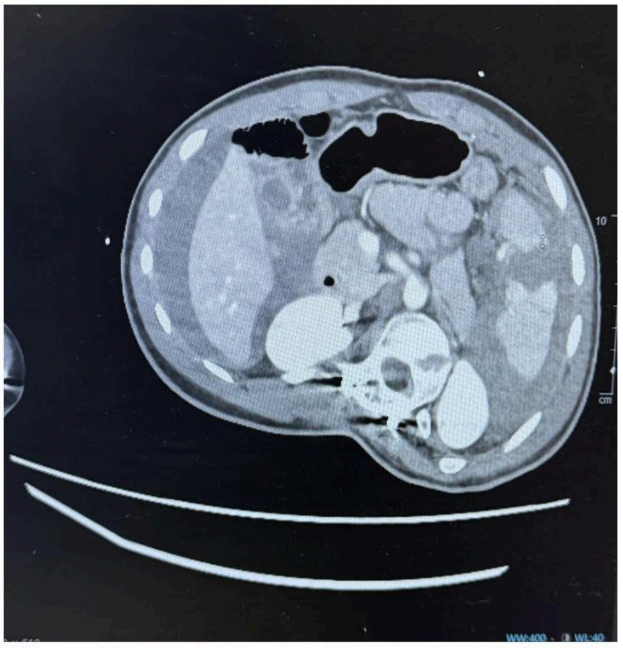
Learning Points

1.Syncope in young patients warrants thorough history-taking, including remote events and minor traumas.

2.Delayed presentation of splenic rupture is possible, especially in adolescent athletes and they can be mis classified as non traumatic with atypical presentations

3.Serious intra-abdominal injuries can present without abdominal pain or guarding, and with stable early observations especially in young adults.

CT ABDOMEN WITH CONTRAST SHOWING HAEMOPERITONEUM WITH GRADE 5 SPENIC LACERATION





Email:clintdavist123@gmail.com