Fever and asplenia: a dangerous association

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DESCRIPTION

A 77-year-old splenectomised woman presented with temperatures reaching 38.5°C in the last 24 hours. The clinical presentation was non-specific and blood tests came back normal: a diagnosis of acute gastroenteritis was made. The patient's clinical state then deteriorated rapidly; she developed septic shock, acute renal failure, disseminated intravascular coagulation and purpura fulminans with peripheral necrosis of toes and fingers (figure 1 A,B), as complications of a pneumococcaemia. Following appropriate antibiotic therapy and supportive care, the patient recovered but had to undergo transmetatarsal and finger amputations(figure 1 C,D).

Fever in patients with asplenia can be the initial, and sometimes sole, sign of a severe infection. It should never be trivialised. Moreover, other clinical signs and symptoms in patients with asplenia with severe infections, can be very non-specific (fever, chills, sore throat, diarrhoea, vomiting and muscle aches). Clinical evolution can be abrupt even with antimicrobial therapy and deterioration can be seen over minutes or hours. It is not rare for such patients to develop disseminated intravascular coagulation.

Streptococcus pneumoniae is the most common pathogen causing disease in patients with asplenia. Other bacteria such as *Haemophilus influenzae* type b, *Neisseria meningitidis*, *Escherichia coli* and *Staphylococcus aureus* can also be found.[1] Antibiotic therapy must be given promptly pending results of blood cultures, in an attempt to decrease the mortality and morbidity of episodes of sepsis in this setting. Ceftriaxone, either intravenous or intramuscular, is an excellent first choice of antibiotic. Indeed, ceftriaxone is active against *S. pneumoniae*, *H. influenzae*, *N. meningitidis* and many community-acquired Gram-negative bacilli, including capnocytophaga.[2] Patients with asplenia should receive all indicated vaccinations including pneumococcal conjugate and polysaccharide vaccines.

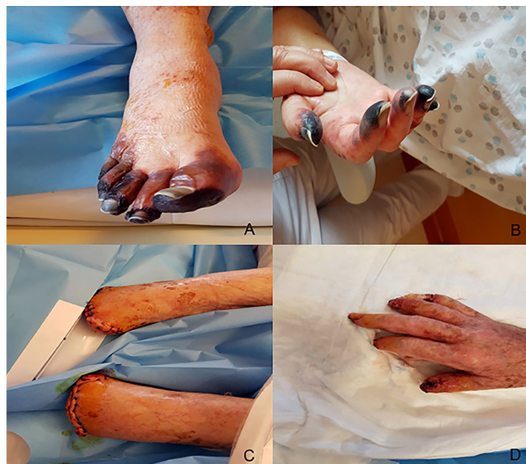

Figure 1 Necrosis of the (A) toes and (B) fingers in the context of disseminated intravascular coagulation. Clinical evolution following (C) transmetatarsal and (D) finger amputations.

Learning points

- Patients with asplenia are at high risk of severe septicaemia that are fatal in up to 50% of cases.
- Antimicrobials should always be administered pending results of blood cultures in splenectomised patients presenting with fever.

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