Images in...

Salmonella haemorrhagic bullae

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DESCRIPTION

A 72-year-old man presented to our hospital with a 3-day history of fever, right foot pain and swelling and a huge bulla (blister) on the right dorsal foot (figure 1). The patient had poorly controlled type 2 diabetes mellitus and chronic obstructive lung disease. Right foot pain and swelling had been evident for more than 2 months and care had been sought at the patient's primary care physician. The patient had been treated as arthritic. No trauma or recent diarrhoea was recalled. The patient had not drunk raw milk or consumed uncooked meat or eggs. On physical examination, the patient was alert but weak. There were several bullae with the largest one being 8×9 cm in size on the right dorsal foot. The patient had a white cell count of 14 870/mm³, with 77.6% segmented neutrophils, haemoglobin of 9.2 gm/dl, platelet count of 100 000/mm³, creatinine level of 3.02 mg/dl, blood glucose level of 353 mg/dl and a C reactive protein of more than 38 mg/dl.

On the second hospital day, the bullae ruptured spontaneously. The skin overlying the bullae revealed necrotic (figure 2). Cultures from the bullae and blood yielded solely *Salmonella enteritidis* group D. Surgical treatment was postponed because of severe gastrointestinal bleeding, poor lung function and persistent thrombocytopenia. On the sixth hospital day, the patient had aspiration pneumonia and developed respiratory failure. After being transferred to the intensive care unit, the condition deteriorated into septic shock and the patient died because of multiple organ failure.

Figure 1 Initial appearance of the affected foot. Upon arriving at the emergency room, a large bulla at dorsal foot that resembled a second-degree burn was evident.

Figure 2 Appearance of the foot during hospitalisation. On the second day of hospitalisation, the bullae ruptured and presented as necrotising fasciitis.

Learning points

- *Salmonella enteritidis* is a member of the non-typhoid *Salmonella*.
- It is a Gram-negative motile bacillus that causes infections with different clinical presentations, most commonly gastroenteritis. Extraintestinal focal infections (EFIs) from *Salmonella* may affect different sites in the body, causing different disorders, which frequently occur during or after *Salmonella* bacteraemia in patients with underlying systemic diseases.¹
- Diabetes mellitus and HIV infection are the most common predisposing illness for systemic *Salmonella* infections.² However, necrotising fasciitis is a rare form of EFI. In the present case, the dorsal foot bullae, although resembling a second degree burn injury, was regarded as 'haemorrhagic bullae', which are usually related to necrotising fasciitis.³
- Necrotising fasciitis is a life-threatening and limb-threatening soft tissue infection, but is an uncommon manifestation of *Salmonella* infection.
- Prompt diagnosis combined with timely surgical intervention and appropriate antibiotics are the key factors to positive patient outcome.

Competing interests None.

Patient consent Obtained.

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