

Diabetes Vignette

St Anthony's Fire in a pregnant woman with diabetes

A 29-year-old woman with type 1 diabetes presented as an emergency with a painful swollen leg. She was 19 weeks pregnant at the time of admission and had been diagnosed with diabetes at age three. Her diabetes had been poorly controlled with recent HbA_{1c} levels around 13% (120mmol/mol).

She gave a four-day history of a painful right lower leg and described a shooting pain radiating from her knee to her foot associated with swelling. On examination, her leg was erythematous and swollen with a small laceration on the anterior aspect which was thought to be due to an insect bite.

The initial impression was either a deep vein thrombosis (DVT) or cellulitis. A Doppler ultrasound of her leg showed no evidence of a DVT and initial wound swab showed no growth; however, she became septic and was started on treatment with intravenous (IV) antibiotics. On day 3 she developed large, fluid-filled blisters on her right leg below the knee. There was a serous exudate and the remaining skin showed features of livedo reticularis. A subsequent wound swab grew *Staph. aureus* and a diagnosis of bullous erysipelas was made. Following advice from a dermatologist, oral steroids were added to her antibiotic treatment (Figure 1).

Discussion

Bullous erysipelas is a clinical diagnosis and is thought to be a rare and severe form of erysipelas usually associated with Group A beta-haemolytic streptococci.¹ It is a superficial cellulitis with lymphatic involvement. Increasingly, as in this case, bullous erysipelas has been associated with *Staph. aureus*.² The superficial cellulitis presents as a hot and red skin rash with well demarcated borders and the presence of indurated dense shiny plaques. The development of large bullae on the skin is often the



Figure 1. The patient's leg after 21 days of IV antibiotics. Erysipelas is also known as St Anthony's Fire, a descriptive term for the intensity of the rash. (St Anthony's Fire is also used to describe the features of ergot poisoning)

first differentiating sign between bullous erysipelas and cellulitis. Lymphatic involvement often presents as overlying skin streaking with localised lymphatic tenderness. Prodromal symptoms such as fever and chills are often also associated with bullous erysipelas.³

Risk factors for this condition include bacterial inoculation of the skin from insect bites, venous stasis or surgical incisions. Other risk factors include immunocompromised states including diabetes, HIV infection and nephrotic syndrome.⁴ This lady had some of the associated risk factors including an immunocompromised state due to her pregnancy and poorly controlled type 1 diabetes. Although bullous erysipelas is a clinical diagnosis, imaging may be used to look for bone involvement and assess further complications. A day 10 serum anti-streptolysin O titre level can be used as retrospective proof of recent streptococcal infection.⁵ Treatment of

bullous erysipelas is with IV antibiotics together with supportive measures and tissue viability input. Despite effective antibiotic treatment there is a recurrence rate of 18–30%.⁶ Death from this condition is extremely rare but long-term lymphatic damage and disfiguring and disabling healing reactions are recognised complications. Together with IV antibiotics there is a role for the use of steroids as studies have shown steroid treatment to be beneficial in terms of reducing healing time and improving the long-term outcome.⁷

In patients with diabetes who present with a painful swollen leg, the diagnosis is not always straightforward cellulitis. The subtle differences in presentation and treatment of cellulitis and bullous erysipelas are important to recognise as effective treatment improves the long-term outlook.

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