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Vulval Necrotising Cellulitis: An Unusual Presentation to the Emergency Room

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Dear Editor,

We write to you with an interesting case of vulval herpes simplex with superimposed necrotising cellulitis.

A woman in her early thirties presented to our emergency room with a two-week history of vulval pain caused by vulval herpes simplex and had been taking oral antivirals in the community. She was sexually active, using barrier contraception, and had a history of vulval herpes simplex six years ago. She had no other gynaecological, medical, or surgical history, took no regular medications and had a BMI of 27 Kg/m2. Specifically, she had no history of immunosuppressing conditions such as diabetes mellitus or human immunodeficiency virus (HIV).

On presentation she was pyrexic, tachypnoeic and tachycardic. On vulval examination there were confluent labial lesions bilaterally extending posteriorly to the perineum with pustular exudate. Vulval swabs as well as baseline blood tests and blood cultures were taken. Laboratory investigations demonstrated raised inflammatory markers. By day three all cultures were negative. After completing 72 hours of intravenous antimicrobials she was transitioned to oral antimicrobials and was discharged home clinically well.

Four days later she represented to the emergency room again complaining of large volume vulval discharge and vulval pain. She was vitally stable and apyrexic. Vulval examination on this occasion revealed bilateral labial necrosis with overlying pustular exudate. The labia minora had become separated from the underlying tissue with almost complete dehiscence of the left labia minora and tissues were generally friable. Vulval swabs cultured *Streptococcus anginosus*. Over the following twelve days multidisciplinary team management included targeted intravenous antibiotic therapy, surgical debridement of necrotic tissue and re-approximation of the dehisced labia minora to their anatomically correct position. Indwelling urinary catheter was used for several days to facilitate use of dressings. Outpatients follow up continued for four months following discharge. The woman made a full recovery with good cosmetic effect.

Vulval infections are a common gynaecological presentation to the emergency room. The differential diagnosis is wide. The anatomy of the vulva can facilitate rapid spread to other tissues potentially resulting in more invasive and locally destructive disease[1]. Whilst most infections are common and easily treated, occasionally they can become life threatening. Necrotising soft tissue infections include forms of fasciitis, myositis, and cellulitis. Clinical features are similar to those seen in this case including local tissue destruction, sepsis, and high mortality rates[2]. Multi-disciplinary input from gynaecology, dermatology, plastic surgery, and microbiology were all utilised here to minimise morbidity and mortality.

Streptococcus anginosus is commonly found as a commensal organism in humans. When it becomes pathogenic it is associated with abscess formation. Bacteraemia is uncommon but can carry a less favourable prognosis[3] and mortality was higher in patients with underlying conditions such as diabetes or immunodeficiency[4]. Most infections are located in skin and soft tissue and are polymicrobial with gram negative anaerobes or enterobacteria being common[4].

This case demonstrates an unusual sequelae of a common vulval infection. In conclusion detailed history taking, thorough clinical examination and a multidisciplinary input resulted in a good outcome for this patient.

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