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Delayed Pressure Urticaria Causing Obstruction of Urinary Flow

Sir,
Delayed pressure urticaria (DPU) is a condition in which red, itchy and sometimes painful cutaneous swellings occur at sites where prolonged pressure has been applied to the skin. Swellings occur from 30 min – 9 h after pressure application, and individual lesions resolve within 12 – 72 h.

CASE REPORT

A 51-year-old man presented to a specialist urticaria clinic with a 5-year history of pressure related weals. He gave no history of spontaneous wealing. Six to 12 hours after vigorous weight-bearing exercise, the soles of his feet would become itchy, swollen and painful. He noticed similar symptoms affecting his hands several hours after heavy lifting or manual work. Tight-fitting clothes would likewise cause swelling and wealing at underlying sites (e.g. at the waistline, socks, and shoes). In addition to these classical symptoms of pressure urticaria, he volunteered problems following sexual activity with his wife. Three to 4 hours following sexual intercourse, he would, on each occasion, suffer severe swelling and wealing of the skin over the base, shaft and prepuce of his penis. During this time, attempts at micturition resulted in dribbling and severe impediment of urinary outflow. In parallel with the swelling of penile tissue, his urinary symptoms would spontaneously resolve within 24 – 48 h and not recur if sexual contact was avoided.

Clinical examination was only possible between episodes of genital swelling. This only revealed linear areas of discrete swellings at his waistline and circumscribed weals on the soles of his feet, whilst genito-urinary examination was normal. Application of pressure to the patient's back with a calibrated, spring-loaded dermographometer at 100 g/mm^2 for 70 s resulted in the development of erythematous indurated papules at 6 h, confirming the diagnosis of delayed pressure urticaria (1).

DISCUSSION

The pathogenesis of delayed pressure urticaria has yet to be fully elucidated. However, histology of lesional skin shows an infiltrate of neutrophils in early weals, with mononuclear cells, neutrophils and eosinophils in later weals (2). Decreased number of stainable mast cells in pressure induced sites of DPU has suggested that mast cell degranulation is a factor in the development of these weals (3). Release of cytokines such as interleukin-6 from affected skin (4) into the circulation may account for the associated malaise, pyrexia and increased erythrocyte sedimentation rate in some patients with DPU.

Dyspareunia and vulvodynia have previously been described in people suffering physical urticaria, and are now being recognized in association with dermographism and delayed pressure urticaria (5 – 6). From a recent survey of urticaria patients attending our specialist clinic, we have found that obstruction of urinary flow is a rare problem amongst the male population with delayed pressure urticaria. However, a patient with hereditary angioedema did report similar swellings and urinary difficulties.

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