Symmetric Fixed Eruption to Heparin

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A patient who underwent haemodialysis for chronic renal failure presented with a bilaterally symmetric fixed drug eruption above the knees. The causative agent was found to be heparin sodium. This 48-year-old woman presented with annular, erythema-tous and pruritic lesions at both the suprapatellar regions for the past year (fig. 1). She also had similar rashes over the legs and in the gluteal region. She was on haemodialysis for chronic renal failure while waiting for a renal transplant. The severity of her symptoms steadily progressed when haemodialysis was increased from once to three times a week. She was on intermittent minimal heparinization using bovine heparin sodium 5,000 IU in benzyl alcohol 10 mg/ml during haemodialysis. She was not on any other drugs. Heparin was suspected to be the causal agent. About 25 min after the initial dose of 3,000 IU of the anticoagulant had been injected directly, the patient complained of itch followed by erythema and tiny vesicles over the affected areas. The symptoms persisted with lesser severity when heparin 1,000 IU was given hourly and then regressed after 4 h of haemodialysis. She was later administered porcine heparin containing chlorbutol 5 mg/ml as preservative. The lesions recurred at the same sites. A punch biopsy showed hyperkeratosis, mild spongiosis, dermal oedema and perivascular lymphocytic infiltrate.

The side-effects of heparin range from mild generalized pruritus, skin necrosis at [1] or away from the site of injection [2] and alopecia to the fatal white clot syndrome due to platelet aggregation [3]. Klein et al. [4] reported 15 patients who developed erythema-tous, infiltrated plaques which resembled eczema clinically and histologically after subcutaneous injection of the anticoagulant

Fig. 1. Bilaterally symmetric fixed eruption.

as a delayed hypersensitivity reaction unrelated to heparin necrosis. To the best of our knowledge this is the first report of fixed eruption due to heparin. Fixed drug eruption is a specific type of cutaneous eruption which recurs at the same site or sites with each administration of the allergenic drug. Although the lesions in our patient occurred at similar sites with intravenous heparin, the histological feature was that of eczema. The reappearance of the eruptions when it was injected and the subsidence of symptoms after dialysis confirm that heparin was the drug to be incriminated. Benzyl alcohol may give rise to allergic skin reactions, but the recurrence of similar eruptions due to porcine heparin containing chlorbutol may rule out the possibility of the preservatives being the cause. Avoidance of the agent is the best and the safest principle in all drug eruptions. Since heparin is essential for haemodialysis which in turn sustains our patient's life, she obtained symptomatic relief with periodic use of a moderately potent topical steroid.

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