Psoriasis developing during dialysis

Remission of psoriasis in patients receiving dialysis for renal failure has been reported.1, 2 Peritoneal dialysis has therefore been advocated for treating refractory psoriasis in patients with normal renal function.3, 4 We report the case of a patient whose psoriasis not only first developed during dialysis for chronic renal failure but also persisted unchanged despite three years of regular haemodialysis.

Case report

A 41-year-old white man was noted to have albuminuria in 1955 when aged 18. Intravenous pyelography showed that the right kidney was absent. He was lost to follow-up until January 1971, when he presented with end-stage renal failure. Regular haemodialysis was instituted in July 1971 via an arteriovenous shunt in the right leg. Home dialysis began in December 1971. An arteriovenous fistula in his right forearm was put into regular use in November 1973. In December 1977 he developed typical guttate patches of psoriasis. The line of the fistula together with patches scarring widely over the trunk and scalp. He had no family history of psoriasis. The psoriasis persisted despite active treatment including at varying times dithranol, coal tar and salicylic acid ointment, and topical corticosteroids. In November 1978 he had extensive psoriasis of the scalp and hairline, widespread small plaques on the trunk (figure), and Köbner lesions along the line of the fistula in the right forearm and at venepuncture sites in the antecubital fossa. Several finger nails were pitted. The histology of a lesion on the chest showed changes characteristic of psoriasis. Haemodialysis has continued throughout apart from a two-week interlude of peritoneal dialysis after the arteriovenous fistula clotted in May 1978. Dialysis has been adequate, biochemical and clinical criteria satisfactory, and the patient has carried on in full-time employment.

Comment

McEvoy and Kelly1 in 1976 first reported complete clearing of psoriasis in a patient with renal failure two weeks after starting dialysis. The remission lasted for a year with dialysis and for a further 11 months after a successful renal transplant and immunosuppressive treatment. Muston and Conceicao1 recorded clearing of psoriasis in one patient within eight weeks of starting dialysis and remission was long lasting. In another patient psoriatic lesions vanished within three weeks and remission was maintained for two and a half years with dialysis, but psoriasis recurred after cadaveric transplantation and cessation of dialysis. Chen et al10 also reported remission in two patients on haemodialysis, one of whom has remained clear for over five years. Twardowski et al11 used peritoneal dialysis for severe disabling psoriasis in the absence of renal failure. Two patients unresponsive to conventional treatment rapidly cleared with this treatment. A third patient with erythrodermic pustular psoriasis failed to respond. A further 16 patients with severe psoriasis without renal failure were treated with peritoneal dialysis over an eight-month period. All were somewhat improved, half substantially so.12

Owing to these reports it has been suggested that a noxious metabolite, or "psoriasis factor," accumulating over many years, in some way stimulates the increased epidermal cell turnover characteristic of psoriasis, and that it is better removed by dialysis than by normal renal clearance. Our case is the first to be reported of psoriasis developing in a patient already being treated with haemodialysis. It conflicts with the "psoriasis factor" theory. We therefore counsel caution against optimistic expectations of dramatic benefit from dialysis in patients with psoriasis.

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