PSORIATIC CLEARANCE DURING HAEMODIALYSIS

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PSORIASIS is an ancient and puzzling disorder of the skin with a very variable natural history. Nevertheless, complete clearance is extremely rare and therefore perhaps worthy of recording.

Case Report

The patient, a forty-three year old male, had psoriasis since the age of twelve years. His brother and a niece have psoriasis, and his brother also has psoriatic arthropathy. No previous family history of the condition is known. The usual local treatment over the years produced little relief.

He came under the care of one of us (J.McE.) at the Nephrology Clinic some years ago because of chronic renal failure on a basis of chronic pyelonephritis. This was managed conservatively with the usual fluid and dietary restrictions, but the condition progressed and eventually became terminal in August, 1973. At that stage he was admitted with a view to assessment for the chronic dialysis/transplant programme.

He was seen at that time for assessment of his psoriasis (by A.M.T.K.). At this stage he was noted to have extensive psoriasis involving trunk, limbs, palms of hands, nails, and scalp. It was feared that the constructions of an arterio-venous fistula to facilitate repeated dialysis might prove impractical because of the Koebner phenomenon. An effort was made to control the psoriasis by the local application of dilute steroid preparations resulting only in a complicating furunculosis which responded to appropriate treatment. Nevertheless, an arteriovenous fistula was constructed without complication and haemodialysis was commenced in September, 1973, twice weekly on Tuesdays and Fridays. Contrary to expectation psoriasis did not develop in the fistula scar, nor at puncture sites, but rather his psoriasis began to clear after the third dialysis. By the conclusion of the fourth treatment it was completely gone. Bi-weekly dialysis was continued for twelve months until September, 1974, during which time no drugs were given. In September, 1974 a successful renal transplant was carried out and followed up with the usual maintenance immunosuppressive therapy of prednisolone 20 mgs. daily and azothroprine 200 mgs. daily. In August, 1975 he remains clear from psoriatic lesions.

Discussion

Ingram (1964) regards psoriasis as an essentially epidermal disorder. He felt however, that the subject merited the attention of those working as physiologists and pathologists because a better understanding of the disease might well uncover some new pathological mechanism which could throw light on generalised disease of obscure aetiology. In his opinion the mechanism of a disorder so common, yet so unusual, could not concern the skin alone. Shuster (1971) reviewing the research on the subject over the previous decade finds that all the recent work takes us back again and again to the skin alone. He concludes that psoriasis remains a disease of the skin itself, but he makes the point that this conclusion in no way excludes a humoral component, though it does imply that any such component will only be significant in relation to the skin.

The normal sequence of events whereby a basal cell becomes keratinized takes twenty-five days. In psoriasis a similar process is accomplished in about four days (Van Scott et al 1964; Weinstein and Van Scott 1965). Shuster feels that psoriasis is a disease of faulty epidermopoiesis possibly due to impaired autocontrol mechanisms. A stimulator control has been suggested by some (Bullough 1967), an inhibitory control is suggested by others (Hell 1970), but the exact cause of psoriasis remains obscure.

Haemodialysis in this patient appears to have had a beneficial effect in the clearance of his chronic psoriasis. This may have been purely coincidental. If the disease is due to faulty epidermopoiesis caused by either a circulating humoral stimulatory or inhibitory substance, one could speculate that haemodialysis had removed this as yet unidentified psoriatic factor. One would have to postulate that this factor is not capable of clearance by normal kidneys but is cleared perhaps by adhesion to the dialysing membrane. In this case one would have expected the psoriasis to recur following transplantation unless immunosuppressive therapy is now the controlling factor. Had the donor been an identical twin immunosuppressive agents would not have been required to prevent rejection (and possibly suppress the psoriatic process), in which case the outcome would have been of even greater interest.

We feel that it is worth reporting this single case

(a) because it may suggest some line of approach to those interested in research into psoriasis, and

(b) because it seems to us that a few episodes of haemodialysis might be worth trying in the more disabling forms of the disease.

Summary

A male patient with chronic psoriasis since the age of twelve years commenced haemodialysis for chronic renal failure in August, 1973. His psoriasis began to clear after the third dialysis and remained clear throughout the entire year of twice weekly dialysis, and subsequently following successful renal transplantation.

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