Dialysis Pruritus and Sensitization

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Dear Sir,

We read with great interest the paper by Rollino et al. [1] on the role of sensitization in uremic pruritus and we wish to comment on their results.

Pruritus does indeed frequently occur in chronic renal failure patients treated by dialysis. Its precise etiology is usually not known although multiple factors are probably involved. This is why we emphasize the need to distinguish between pruritus associated with skin lesions and isolated pruritus.

In the first case, urticaria may occur early in a hemodialysis session, often accompanied by other anaphylactoid manifestations (flush, rhinorrhea, respiratory or cardiovascular manifestations). Hypersensitivity testing is required to look for specific IgE reacting with substances related to dialysis. When pruritus is associated with eczema, tests for delayed hypersensitivity should be carried out for the numerous substances coming into contact with patients' blood or skin at each dialysis session. It is regrettable that Rollino et al. tested such a small number of antigens. In a study we conducted on 26 eczematous patients, we found that a very large number of reactogenic substances are involved (table 1). In our series the frequency of sensitization was 61.5%, with 4 patients having polysensitization. The most frequently encountered sensitizing agent was formaldehyde (FA) which is known for its capacity to induce delayed hypersensitivity with eczema [2]. In earlier studies [3, 4] it has been demonstrated that small quantities of FA can be injected intravenously after being trapped in certain dialysis generators after disinfection. In home dialysis patients, skin contact may also occur with instruments kept in FA. Iodine products used for skin disinfection are also frequent sensitizing agents. Following this study, we made certain changes. We modified the generators and eliminated sensitizing agents. Two years later we were able to study 13 of the patients again. Eczema and pruritus had disappeared in 10 of them (76.9%).

Isolated pruritus is a very different problem for which there is no convincing argument incriminating secondary hyperparathyroidism, hypermagnesemia or hypervitaminosis A. Some authors have suggested that

Table 1. Substances tested and number of patients with very positive patch

histamine may play a role, but recent studies [5-7] do not confirm this. From the data reported by Rollino et al. and our own findings [unpubl. results] it would appear unlikely that delayed hypersensitivity is involved. An abnormal liberation of prurigenic substances should be considered. Such substances may include cytokines or neurotransmitters.

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