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Contact urticaria to locusts

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SUMMARY

We describe a case of allergic contact urticaria provoked by locusts in a laboratory research worker. One of her colleagues also had locust-induced contact urticaria, and another had asthma provoked by locust exposure. Contact urticaria to locusts is an occupational hazard apparently well known to professional entomologists, but one which has not previously been described in the dermatological literature, to my knowledge.

CASE REPORT

The patient was a 23-year-old research biochemist working in a university zoology department on the mechanism of action of neurotoxins in the locust. Her work regularly required her to enter the insect house in which a large breeding colony of locusts was maintained. She had a history of mild hayfever and asthma in childhood, but these had been in remission for some years. Within a few weeks of starting work in the department she had noted that whenever she entered the locust house, exposed areas of skin would begin to itch, swell, and go red, the changes occurring within a few minutes. Direct physical contact with the locusts would produce local swelling within 2 min. The symptoms abated within a few hours, and disappeared totally during the university vacation when she was away from work. Protective clothing gave some relief. Four other students worked in the same department; two were symptom free, but two gave histories of an immediate-type of reaction on entering the locust house. In one subject this was manifested as asthma, and in the other as conjunctivitis and contact urticaria. In the latter instance the symptoms were of a severity sufficient to cause the subject to abandon her research project; this was followed by a resolution of the symptoms.

The patient was investigated by prick testing, and this showed positive reactions to grass pollens, house dust mite, cockroach antigen (Dome Hollister-Stier), and locust antigen, (prepared by the Brompton Hospital, London, according to the method of Burge *et al.*¹). Her total blood IgE level was mildly elevated at 302 IU/l. A direct provocation test with a live locust produced an immediate wealing reaction at the sites of contact, developing within 1 min. No reaction was seen in a control subject with no previous history of locust exposure.

DISCUSSION

Locusts are swarming migratory grasshoppers whose destructive effects on crops and vegetation have been known since biblical times, and continue to have a devastating impact on many of the poorest countries on earth. Sensitivity reactions including contact urticaria provoked by locusts and their debris are well recognized as an occupational hazard by professional entomologists,² and may be severe enough to cause the subject to abandon working with locusts. The problem is apparently rarely encountered in the field, even when locusts are in dense swarms, but is common in research centres where large numbers of locusts are maintained in breeding colonies, usually in relatively confined spaces. The problem of locust sensitivity was first investigated by Frankland³ who studied workers in two research centres, and found that a number gave a history of asthma, rhinitis and in three cases contact urticaria. Burge *et al.*¹ studied workers in one of the research centres which had been included in Frankland's original study and found a high incidence of work related asthma, rhinitis, and contact urticaria, the latter symptom being present in one third of subjects. Positive prick tests to locust antigen were present in affected subjects; marked cross reactivity was also shown to cockroach, an entomologically related species which itself may provoke hypersensitivity reactions.⁴ Atopic subjects were more commonly, but not exclusively, affected. The allergen has now been identified as the peritrophic membrane of the midgut, which surrounds the faeces and is dispersed through the air in an enclosed environment; specific IgE to this allergen has been demonstrated in the blood of affected individuals.⁵

The propensity of locusts to provoke sensitivity reactions is sufficiently well known among professional entomologists that it is unlikely to cause diagnostic difficulty. Locusts are, however, also widely used in the teaching of biology in schools and colleges where their potential for inducing cutaneous reactions may not be appreciated.

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Kaposi's sarcoma in kidney transplant recipients treated with cyclosporin

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SUMMARY

We report the clinical and histological features and the course of Kaposi's sarcoma in three transplant patients treated with cyclosporin. Four months after cyclosporin treatment was stopped the lesions in all three patients had completely healed.

At present at least four different types of Kaposi's sarcoma (KS) are well recognized. These are sporadic Kaposi's sarcoma, endemic KS in African countries, epidemic KS related to AIDS and KS in patients on immunosuppressive therapy.¹

In the last 10 years there have been several reports of KS in patients with various disorders treated with immunosuppressive agents,^{2,3} the most frequent being after renal transplantation.⁴ KS has been reported in kidney transplant recipients treated with azathioprine plus a steroid.⁵ We report here the clinical and histological features, the course and the treatment of KS in three kidney transplant patients treated with cyclosporin. The patients were seen during long term surveillance for skin cancer of a large series of kidney transplant patients treated with cyclosporin.

CASE REPORTS

Immunosuppressive regimen

The patients were treated with cyclosporin plus a steroid. The immunosuppressive regimen was i.v. cyclosporin 5 mg/kg/day on 4 consecutive days, starting the day before surgery, followed by oral administration of 15 mg/kg/day, decreased every 2 weeks by 2 mg/kg/day to a maintenance dose of 7 mg/kg/day, in combination with 120 mg/day methylprednisolone i.v., for 4 days followed by 16 mg/day, orally, tapered off to 8 mg/day over 6 months.

One patient (Case 3) was treated also with azathioprine, at a maintenance dose of 50 mg/day.

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