

## CONTACT HYPERSENSITIVITY TO *MIKENIA SCANDENS* — A RECENTLY INTRODUCED WILD CREEPER OF ASSAM AND MEGHALAYA

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A wild creeper *Mikania scandens* was observed to grow profusely over the plantations throughout the states of Assam and Meghalaya. To evaluate the potential of this weed for causing contact dermatitis, patch tests were performed with the leaves of this plant on patients having contact dermatitis due to various causes. Out of 31 patients tested at Guwahati, 2 patients showed (++) reactions and another 2 showed (+) reactions. These patients had dermatitis on their hands (2 cases), face (1) and legs (1) respectively. Out of 100 patients tested at Delhi who had never been exposed to this plant, 2 patients showed (++) reactions, 1 patient showed (+) reaction, while another 8 patients showed ( $\pm$ ) reactions. These reactions are likely to be instances of cross sensitivity to an as yet unidentified chemical. It seems important to monitor the development of further cases of contact dermatitis due to this plant.

**Key words:** Contact hypersensitivity, Plant, *Mikania scandens*.

During a recent trip to Assam and Meghalaya (eastern India), a wild creeper weed (*Mikania scandens*) was observed to grow profusely along the highway roads throughout both the states. It was over-growing not only the electric poles, small huts and other similar structures, but also covering the plantations such as bamboo, banana and other trees growing nearby. The economic menace of this weed was obvious. One of the doctors mentioned about the possibility of contact dermatitis due to this weed in the same way as *Parthenium hysterophorus* has played havoc in most of the Indian states.<sup>1</sup> It was therefore, decided to evaluate the current status of contact hypersensitivity to this plant.

### Materials and Methods

The study was simultaneously conducted at two centres, one at Guwahati (Assam) which

would test individuals who have already been exposed to this plant for some time now, and the other at Delhi where the patients had no chance of having been exposed to this plant. Patch tests were performed with the leaves of this plant used as such, under the standard occluded patch test technique,<sup>2</sup> on patients having contact dermatitis due to various agents. The patch test reactions were graded into, no reaction (-), doubtful reaction ( $\pm$ ), mild reaction (+), distinct papular reaction (++) and more severe reactions (+++) and (+++++).

### Results

A total of 100 patients were tested at Delhi and 31 at Guwahati. Of these, 4 patients (2 at Delhi and 2 at Guwahati) showed (++) reactions, 3 patients (2 at Guwahati and 1 at Delhi) showed (+) reactions, while another 8 patients all at Delhi showed ( $\pm$ ) reactions. The two patients at Guwahati showing (++) reactions were having dermatitis on their hands, while the other two Guwahati patients who showed (+) reactions were having dermatitis on their face and leg respectively. Of the Delhi patients,

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one patient with a (++) patch test was having dermatitis on the feet due to the shoes, while the other two with a (++) and (+) reaction respectively were clinically normal individuals. Of the 8 Delhi patients with a (±) reaction, 4 were having air-borne contact dermatitis, 3 were having dermatitis due to antibacterial drugs, wool and leather respectively, while the eighth patient was a normal control.

### Comments

A truly positive patch test reaction is an unequivocal indication that the individual is allergic to the agent used for patch test. However, the individual may have become sensitized to the chemical because of previous exposure(s) to the same chemical, or he may have actually been sensitized to a different, but chemically related agent and the positive patch test may be a reaction of cross sensitivity. Positive patch tests in the Delhi patients are most probably instances of cross sensitivity because there was no possibility of these individuals having been exposed to and developing contact hypersensitivity to this plant. Further studies however, will be necessary to identify this cross sensitizing

agent. Positive patients at Guwahati on the other hand, can be regarded as instances of contact dermatitis due to *Mikania scandens* though as yet there is no conclusive proof that the dermatitis in these patients was actually being produced by this plant, apart from the finding that the incidence of positive patch tests at Guwahati was 13% compared to 3% at Delhi. The low incidence of positive reactions and the type of dermatitis produced at the patch test site, suggest that the reactions were allergic in nature and not irritant. These findings thus suggest that it is necessary to be vigilant about the possibility of further individuals developing contact dermatitis due to this plant. The clinical picture of contact dermatitis should be almost the same as produced by *Parthenium hysterophorus* or any other air-borne contact antigen.<sup>1</sup>

### References

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