Novel treatment (new drug/intervention; established drug/procedure in new situation)

Contact dermatitis to parthenium weed treated with methotrexate and triamcinolone acetonide

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Summary

The authors present a case of contact dermatitis due to contact with parthenium weed (CDP) treated with intralesional injection of triamcinolone acetonide and methotrexate 7.5 mg/week for 4 weeks. Discussion about CDP is mentioned in short.

BACKGROUND

Parthenium hysterophorus L. (congress grass, congress weed, carrot weed, wild feverfew, the 'Scourge of India') is an exotic weed that was accidentally introduced in India in 1956 through imported food grains.¹ Vitiliginous skin appears to be spared perhaps due to the vacuolization of langerhans cells in these areas.²

CASE PRESENTATION

A 72-year-old man came to our office with complaints of pruritus and burning over face and forehead since 10 years. He was a farmer by occupation and comes in contact with parthenium weed. A clinical diagnosis of CDP secondary to contact with parthenium weed was made. Cutaneous examination revealed diffuse plaques with adherent scales distributed over entire face and forehead, normal skin markings were exaggerated, multiple excoriations were seen over face and forehead. Lesions were also seen around neck. Laboratory examinations including liver function tests were within normal ranges. The patient was advised not to expose to parthenium weed. On 9/12/2009 the patient was treated with 1. Halobetasol cream 0.05% locally daily two times 2. Tab Cetrizine 10 mg daily two tablets 3. Tab Methotrexate 7.5 mg/week 4. Cap Cephalixin 500 mg daily two for five days. The next visit of the patient was on 9/19/2009. On 09/19/2009 the treatment mentioned above was repeated with the addition of treatment mentioned below: Intralesional triamcinolone acetonide 40 mg 0.05 ml was given on right side of face and forehead. Intralesional normal saline was given on left side of face and forehead. On 09/19/2009 patient said there was 50% reduction in pruritus and burning. The next visit of the patient was on 09/30/2009. The treatment given on 09/19/2009 was repeated.

Patient said pruritus and burning subsided on right side of face and forehead, pruritus was present on left side of face and forehead. The next visit of the patient was on 10/07/2002. The treatment given on 09/19/2009 was repeated. On 10/07/2002 patient said 75% pruritus and burning subsided on right side of face and forehead and 50% pruritus and burning subsided on left side of face and forehead.

INVESTIGATIONS

Laboratory examinations including liver function tests were within normal ranges.

TREATMENT

Patient was treated with intralesional injection of triamcinolone acetonide and methotrexate.

DISCUSSION

Parthenium hysterophorus L. (congress grass, congress weed, carrot weed, wild feverfew, the 'Scourge of India') is an exotic weed that was accidentally introduced in India in 1956 through imported food grains.¹ It has become a common weed causing dermatitis of epidemic proportions.³ The epithet 'congress weed' refers to the US congress (who allocated the shipment for Pune, India).⁴ In Pune, it found an ecological niche without natural enemies and spread rapidly along the canal banks, roads and railway tracks to become a major field weed.⁵ Both rural and urban areas have been invaded by this weed. It is the leading cause of plant induced airborne contact dermatitis (ABCD) in India.⁶ and has achieved major weed status in India and Australia within the past few decades.⁷ A typically ABCD involving the eyelids and nasolabial folds, photodermatitis (essentially a pseudo-photodermatitis) involving the eyelids, nasolabial folds, areas under the chin and behind the ears, atopic dermatitis, seborrheic dermatitis, exfoliative dermatitis and photosensitive lichenoid dermatitis. Hand dermatitis is observed in gardeners after contact with the weed.⁸ Vitiliginous skin appears to be spared perhaps due to the vacuolization of Langerhans cells in these areas.² Oral hyposensitization has been successfully attempted in several small studies; patch test reactions decreased or became negative and the patients clinically improved.⁸⁻⁹ Acute dermatitis has to be treated immediately. Once daily application of potent topical steroids is as effective as twice daily.¹⁰ Potent topical steroids and oral prednisone are relatively ineffective unless employed early.⁸⁻¹¹⁻¹² Antihistamines suppress only the immediate reaction of type I hypersensitivity.¹³ Systemic corticosteroids have been the mainstay of treatment in the acute phase. Long-term use may lead to adrenocortical axis

suppression with attendant complications.¹⁴ A trial with dexamethasone-cyclophosphamide pulse therapy was unsuccessful.¹⁵ Methotrexate has also been reported to be effective at a dose of 15 mg/week along with topical corticosteroids and sunscreens.¹⁶ There are no reports on CDP treated with methotrexate and intralesional triamcinolone acetonide. Our patient responded very well to intralesional injection of triamcinolone and methotrexate 7.5 mg/week for 4 weeks. Methotrexate and intralesional triamcinolone acetonide is of help in CDP.

Learning points

- ▶ *Parthenium hysterophorus* L. (congress grass, congress weed, carrot weed, wild feverfew, the 'Scourge of India') is an exotic weed that was accidentally introduced in India in 1956 through imported food grains.
- ▶ Methotrexate and intralesional triamcinolone acetonide is of help in CDP.
- ▶ There are no reports on CDP treated with methotrexate and intralesional triamcinolone acetonide.

Competing interests None.

Patient consent Obtained.

REFERENCES

1. **Lonkar A**, Mitchell JC, Calnan CD. Contact dermatitis from *Parthenium hysterophorus*. *Trans St Johns Hosp Dermatol Soc* 1974;**60**:43–53.
2. **Singh KK**, Srinivas CR, Balachandran C, *et al*. *Parthenium dermatitis* sparing vitiliginous skin. *Contact Derm* 1987;**16**:174.
3. **Mitchell JC**, Calnan CD. Scourge of India: *Parthenium dermatitis*. *Int J Dermatol* 1978;**17**:303–4.
4. **Guin JD**. Sesquiterpene-lactone dermatitis. *Immunol Allergy Clin North Am* 1989;**9**:447–61.
5. **Behl PN**, Captain RM. Skin Irritant and Sensitizing Plants Found in India. Ram Nagar, New Delhi: S. Chand 1979.
6. **Lonkar A**, Jog MK. Dermatitis caused by a plant *Parthenium hysterophorus* Linn. A preliminary report. *Indian J Dermatol Venereol Leprol* 1968;**34**:194–6.
7. **Evans HC**. *Parthenium hysterophorus*: a review of its weed status and the possibilities for biological control. *Biocontrol News Information* 1997;**18**:89N–98N.
8. **Warshaw EM**, Zug KA. Sesquiterpene lactone allergy. *Am J Contact Dermatitis* 1996;**7**:1–23.
9. **Wrangsjö K**, Ros AM. Compositae allergy. *Semin Dermatol* 1996;**15**:87–94.
10. **Narasimha SK**, Srinivas CR, Mathew AC. Effect of topical corticosteroid application frequency on histamine-induced wheals. *Int J Dermatol* 2005;**44**:425–7.
11. **Suresh PV**, Gupta D, Behera D, *et al*. Bronchial provocation with parthenium pollen extract in bronchial asthma. *Indian J Chest Dis Allied Sci* 1994;**36**:104.
12. **Fisher AA**. Esoteric contact dermatitis. Part IV: Devastating contact dermatitis in India produced by American parthenium weed (the scourge of India). *Cutis* 1996;**57**:297–8.
13. **Smith JA**, Mansfield LE, deShazo RD, *et al*. An evaluation of the pharmacologic inhibition of the immediate and late cutaneous reactions to allergen. *J Allergy Clin Immunol* 1980;**65**:185.
14. **Gallant C**, Kenny P. Oral glucocorticoids and their complications. A review. *J Am Acad Dermatol* 1986;**14**(2 Pt 1):161–77.
15. **Pasricha JS**. Story of pulse therapy in pemphigus and other dermatoses. In: Shankar PS, Biradar PM, editors. *Advances in dermato-venereo-leprology*. Gulbarga, Karnataka, India: South Zone conference of IADVL 1992:53–60.
16. **Sharma VK**, Bhat R, Sethuraman G, *et al*. Treatment of parthenium dermatitis with methotrexate. *Contact Derm* 2007;**57**:118–19.

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Please cite this article as follows (you will need to access the article online to obtain the date of publication).

Kuchabal SD, Kuchabal DS. Contact dermatitis to parthenium weed treated with methotrexate and triamcinolone acetonide. *BMJ Case Reports* 2011; 10.1136/bcr.03.2011.3926, date of publication

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