

Letter to the Editor**Real-life clinical experience of using diphencyclopropenone**J M White^{1,2}

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Sir,

We were interested to read about potential immune augmentation to vaccines by the use of diphencyclopropenone (DCP)¹. Hopefully, use of DCP (or other contact sensitizers) may prove a novel way to increase efficacy of SARS-CoV-2 vaccines in all those immunised, as well as those who mount inadequate immune responses (elderly, immunocompromised patients etc.). Given Cunningham's theoretical interest in immunotherapy, I would like to share some clinical experience in 1023 patients treated between 2002-2021 with DCP used as a treatment for therapy-resistant common warts and 43 patients treated for alopecia areata. Until recently, immunotherapy was available on the NHS in specialised centres, but recently funding was withdrawn due to budgetary constraints. The treatments described here were performed by the author in both hospital and private practice settings, data being retrieved from an electronic database. DCP is an unlicensed treatment, so adequate informed consent is mandatory. Recommendations for a treatment protocol have been published². Sensitization was with 2% DCP on medial aspect of the upper arm with that area kept dry for 24 hours. >99% of our patients sensitized with a single application of 2% DCP and the remainder sensitized with a second application. Treatment concentrations varied from 0.001% - 9% of diphencyclopropenone, depending on indication and response. Application was typically every 2-4 weeks. Approximately 7-9 treatments were required for warts to achieve clinical clearance, with more (typically >15) required for the treatment of alopecia areata (35 of these patients nevertheless had no clinical improvement and the treatment was abandoned). Adverse reactions were actively solicited and recorded contemporaneously, however it is likely that there was some under-reporting by patients or by those lost to follow-up. Generally, the treatment was well tolerated in over 90% of patients. Given that DCP is an extremely potent allergen (class I)³, it is not surprising that the commonest side-effect was a marked localised allergic reaction, sometimes with limited blistering of the skin, however such reactions only infrequently resulted in cessation of treatment. In less than 1% of all treated patients, generalised urticaria was seen but this always spontaneously resolved within days or weeks. There were no other side-effects noted. Basic blood parameters such as renal profile, liver function tests and a full blood count were monitored during treatment for a small number of patients in the early 2000s, and were all normal⁴. In the small number (147) of patients who were immunocompromised either via untreated HIV infection or systemic immunosuppressive therapy (via different

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agents), clinical efficacy was reduced but not abolished and 6 immunocompromised patients required a second sensitizing dose. These data are comparable to previously published data on DCP treatment in the immunosuppressed.⁵ This need for a potential second dose for sensitization should be a consideration in the cohort of patients envisaged by Cunningham. DCP immunotherapy is a well-tolerated treatment which would be suitable as an adjuvant to vaccination. If large populations of patients were to undergo contact sensitisation at the same time as vaccination to reduce transmission of SARS-CoV-2, it would be sensible to have ready access to a dermatologist experienced in the use of immunotherapy in case of strong skin reactions.

Conflict of interest: I have no actual or perceived conflicts of interest in this report.

References

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