

- CONTRIBUTIONS TO THIS SECTION WILL NOT UNDERGO PEER REVIEW, BUT WILL BE REVIEWED BY THE EDITOR •

Photoallergic contact dermatitis caused by occupational exposure to the canine non-steroidal anti-inflammatory drug carprofen

Clare Kiely¹ and Gillian Murphy²

¹Department of Dermatology, Mater University Hospital, Dublin, Ireland and ²Department of Dermatology, Mater University Hospital; Department of Dermatology, Beaumont Hospital, Dublin, Ireland

doi:10.1111/j.1600-0536.2010.01820.x

Key words: Photoallergic contact dermatitis; Carprofen

Introduction

Carprofen is a widely used and potent photoallergen that should be considered in patients presenting with exposed-site dermatitis.

Case History

A 28-year-old pharmaceutical worker presented with an itchy erythematous facial rash. It consistently evolved hours after she had been at work, and was gradually becoming more inflamed. She had been working in a laboratory formulating a pure carprofen powder for 3 weeks. The rash resolved when she was absent from the workplace. Her skin repeatedly flared if she entered the laboratory space, even when not in contact with chemicals. Her protective clothing consisted of a laboratory coat, gloves, a mask, and safety glasses.

She was patch tested with the Chemotechnique IQ Ultra chambers unit. She had the British baseline series and our cosmetic series applied to the back. Extra allergens tested were 1% carprofen in pet., 1% diclofenac gel, and 2.5% ketoprofen gel. One control patch was non-irradiated. The other patch was irradiated with UVA at 5 J/cm² and read at D2 and D4. At D4, she showed a + reaction to non-irradiated 1% carprofen, and a strong ++ reaction to irradiated 1% carprofen. She had no reaction to irradiated and non-irradiated diclofenac gel and ketoprofen gel (Fig. 1).

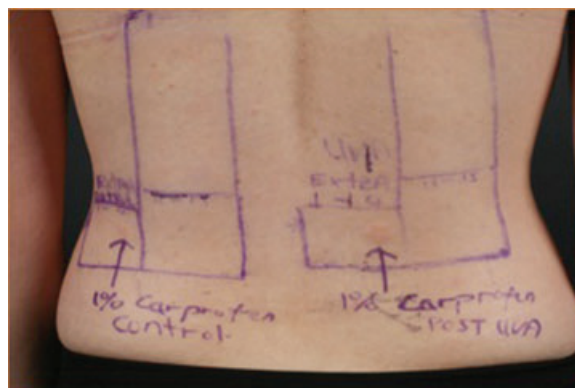


Fig. 1. Patch test result: 1% carprofen on left +, irradiated 1% carprofen on right ++.

Discussion

Carprofen (marketed as Rimadyl; manufactured by Pfizer Animal Health) is a non-steroidal anti-inflammatory drug that is used by veterinarians as a supportive treatment for the relief of arthritic symptoms in geriatric dogs. Carprofen is a potent photoallergen. This patient had both contact-allergic and photoallergic contact dermatitis (PACD) caused by carprofen. The positive photopatch reactions were stronger than the reactions to the non-irradiated patch, indicating true PACD in addition to contact allergy. We used 1% carprofen, as this was the lowest concentration used in previous studies (1). There have been three previous reports of PACD caused by carprofen in pharmaceutical workers (1, 2). Our patient is the fourth reported case of PACD caused by carprofen and the second reported case to have both positive patch and photopatch test reactions. The patient's symptoms were severe enough to warrant her leaving the workplace in the laboratory and taking up office work. Repeated flare of her

Correspondence: Clare Kiely, Department of Dermatology, Mater University Hospital, Dublin, Ireland. Tel: 0035318034348, Fax: 003538034307. e-mail: clarekiely@hotmail.com

Conflicts of interest: The authors have declared no conflicts.

rash on entering the workplace indicated that workers had extensive airborne exposure. The material safety data sheet for powder carprofen advises minimizing dust generation and accumulation, and wearing protective clothing, gloves, and safety glasses. Our patient was symptomatic despite these measures.

Carprofen is in widespread use by pet owners, and is manufactured in many laboratories. Our case adds to the existing literature confirming carprofen as a potent photoallergen that should be considered in patients presenting with exposed-site dermatitis.

References

- 1 Walker S L, Ead R D, Beck M H. Occupational photo allergic contact dermatitis in a pharmaceutical worker manufacturing carprofen, a canine nonsteroidal anti-inflammatory drug. *Br J Dermatol* 2006; **154**: 569–570.
- 2 Kerr A C, Muller F, Ferguson J, Dawe R S. Occupational carprofen photo allergic contact dermatitis. *Br J Dermatol* 2008; **159**: 1303–1308.