

## Correspondence

### Urticaria triggered by antiallergy treatment

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A 50-year-old woman presented with a 2-month history of chronic urticaria. She had a history of atopic eczema since early childhood and of allergic asthma for 10 years. There was also a previously documented episode of urticaria after taking aspirin, and an allergy to natural rubber latex. Her long-standing medication included oestrogens, budesonide and disodium-cromoglycate/reproterol inhalers. Three months before the onset of urticaria, the patient had been put on montelukast sodium 10 mg/day for her asthma. One week before urticaria onset, the patient had started taking omeprazole. As the temporal relationship between these two recent medications and the onset of urticaria suggested a possible causative link, montelukast and omeprazole were discontinued, and subsequently, the urticaria resolved.

A skin-prick test was carried out. There were no immediate-type reactions to standard series of common aeroallergens and food allergens, with the exception of a 1+ reaction to dog dander (histamine control 1+). For further skin-prick tests, tablets of the suspected medications (omeprazole 20 mg; Antra® multiple unit pellet system; Astrazeneca GmbH, Wedel, Germany and montelukast sodium 10 mg, Singulair®; Dieckmann Arzneimittel GmbH, Haar, Germany) were crushed and suspended in saline. There was no reaction to either medication. Serum analysis revealed specific IgE antibodies to milk protein, casein (each CAP class 3), *Dermatophagoides pteronyssinus*, dog, cat, hazel pollen, peanut, natural rubber latex (each class 2), and to *Dermatophagoides farinae*, rye, timothy grass (*Phleum pratense*), carrot, sesame, pork and beef (each class 1). Total serum IgE was 2365 kU/L.

An oral challenge test with incremental doses of omeprazole was tolerated without symptoms of hypersensitivity. Similarly, reinitiation of omeprazole therapy with 20 mg daily for 3 days provoked no reaction. Oral challenge with montelukast (1 and 5 mg given 2 h apart) resulted in pruritus, starting 30 min after the second dose had been given. This was followed by weals at 5 h, and dyspnoea and globus sensation at 12 h. As the reaction to montelukast was unexpected, the oral challenge test was repeated for confirmation 4 months later. At 70 min after the second dose of montelukast 5 mg, the patient developed weals (Fig. 1).

Montelukast is a selective antagonist of type 1 cysteinyl leukotriene receptors (LTRA). It is approved as a nonsteroidal antiasthma drug in many countries. Because of its anti-inflammatory and antiallergy effects, it has also been proposed as a potentially useful drug in the treatment of chronic urticaria.<sup>1–3</sup> Usually, LTRA antagonists are safe and well-tolerated drugs. However, several types of hypersensitivity reactions to these drugs have been reported, including tubulointerstitial nephritis, Churg–Strauss

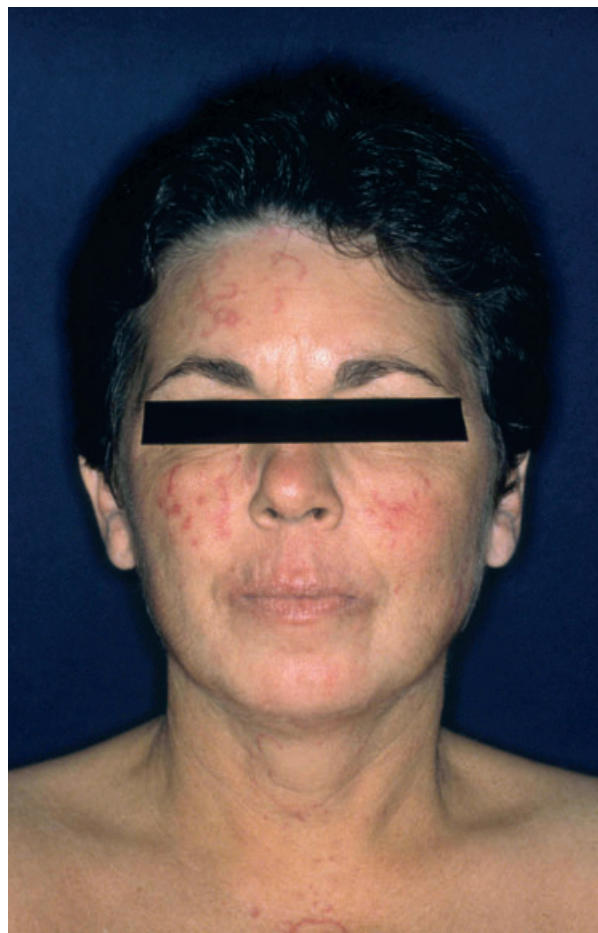


**Figure 1** Erythematous weals on the forehead and cheeks 70 min after oral challenge with montelukast 5 mg (Singulair®).

syndrome, cutaneous vasculitis, childhood pemphigus, thrombopenia, hepatitis, panniculitis and also one case of urticaria.<sup>4</sup>

In our case, the Naranjo adverse drug reaction probability score was 6, classifying the relationship between montelukast and urticaria as 'highly probable'.<sup>5</sup> The reason for our patient's apparently paradoxical reaction to an antiallergy drug that has been proven effective for the therapy of urticaria in many other patients remains essentially unclear. The fact that urticaria developed 1 month after beginning montelukast treatment, whereas re-exposure triggered reactions within hours, suggests a sensitization period and hence an immunological mechanism. However, a pseudoallergic, nonimmunological pathomechanism cannot be excluded.

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Conflict of interest: none declared.

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