



Figure 1. Linear urticarial streaks secondary to intravenous opioids.

venous vasculature course of his right upper extremity, where the intravenous line was inserted. The rash was asymptomatic and consisted of a prominent wheal (palpable edema) and flare (localized erythema) response in a striking perivascular distribution (Fig. 1). The rash was not associated with any systemic symptoms, did not extend beyond the arm of the patient, and spontaneously resolved over the next 40 min. Literature review did not show a previous case with linear urticarial streaks in response to opioids.

Mast cells originate in the bone marrow and are widely distributed in connective tissues throughout the body. However, they tend to be concentrated mainly at epithelial surfaces and around blood and lymphatic vessels. A functionally important distribution as it allows a prompt response of the mast cells to noxious stimuli. The mast cells respond to various stimuli by degranulation and generation of lipid mediators and cytokines (1). Upon degranulation, the mast cell preformed mediators (histamine, tryptase, chymase) are the first to be released. Among those, histamine is the only one to be released as fast as 30 s after stimulation and to have an observable effect within 1–5 min on local vasculature. Hence, the wheal and flare that were observed in our patient shortly after the infusion are probably histamine-mediated (1).

Linear urticarial streaks are usually seen in parasitic infections with *Strongyloides stercoralis* and are known as larva currents (2). They have not been reported before to be associated with opioids. Opioids of various molecular structures, including meperidine, are known to produce cutaneous vascular responses dependent on both histamine

release from mast cells and direct opioid-mediated capillary vasodilatation (3).

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Pattern of use and diagnostic value of complementary/alternative tests for adverse reactions to food

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Key words: alternative tests; double blind placebo controlled food challenge; food allergy; food intolerance.

Complementary/alternative medicines are largely used in clinical practice (1) and so are diagnostic techniques, despite convincing proofs of their validity lack

Alternative diagnostic procedures are of no value for food-related problems.

(2). Alternative tests (e.g. kinesiology, leukocytotoxic test, electrodermal tests, iridology and hair analysis) are preferentially utilized in the field of adverse reactions to foods (3), probably because many disorders are classified as 'food allergies', despite there is no demonstration of the underlying mechanism. We evaluated the pattern of use and outcomes of complementary alternative tests in patients with a suspect of food allergy/intolerance in real-life. Patients referred with a suspicion of food-related problems, before beginning the standard diagnostic workup, were asked about the previous use of alternative tests. The results obtained with those tests were compared, when possible, to the double blind placebo controlled food challenge (DBPCFC).

One hundred and thirty-two patients were referred for a suspected diagnosis of 'food allergy' or 'food intolerance' in the period March–December 2003. Out of them, 87 (66%) patients had previously undergone alternative diagnostic tests. Their mean age was 38 year (range 4–72) and 62 were females. The distribution of alternative tests among the 87 patients was: 61% electrodermal testing, 19% kinesiology, 11% cytotoxic test, 5% hair analysis and 4% iridology. The symptoms were: dermatological or gastrointestinal in 54% of patients, respiratory in 36% and behavioural in 8%. Out of 87 patients, alternative tests had provided at least one positive result in 86, being milk, flour, yeast and tomato always positive in all patients. Skin prick tests carried out with a panel of commercial extracts (Stallergenes, Milan, Italy) including: milk, egg, shrimp, codfish, salmon, peanut, soybean, hazelnut, wheat, rice, tomato, carrot and apple) provided negative results in 79/87 patients. Three patients had positive prick test to peanut, three to peanut and soybean, one to wheat and one to shrimps. These positivities, all clinically relevant, were invariantly different from those found by alternative tests. A DBPCFC (4)

Table 1. Results of the DBPCFC and of the alternative tests for the same foods

Food	N	Results of the DBPCFC		Positive results of the alternative tests			
		Positive	Placebo positive	VEGA Test	DRIA test	Cytotoxic test	Iridology
Milk	26	1/26	18/26	10/26	3/26	13/26	—
Yeast	7	0/7	4/7	3/7	1/7	3/7	—
Wheat	8	0/8	4/8	3/8	2/8	3/8	—
Egg	1	0/1	0/1	—	—	—	1/1

could be performed in 42 patients, since 36 subjects refused it. The DBPCFC was carried out by commercial liophilized extracts (Test dose, Lofarma SpA, Milan). The cumulative doses given were 85 mg milk, 10 mg yeast, 32 mg wheat and 20 mg egg. The results of the food challenges, compared to those obtained with alternative procedures, are summarized in Table 1. In no case, but one, the positivity of alternative tests was confirmed by the DBPCFC. A subjective response to placebo (itching, malaise, nausea and headache) was invariably observed in about 50% of subjects.

Complementary/alternative diagnostic procedures represent a relevant problem for both general practitioner and specialists. In our relatively small population, two-thirds of the subjects had a previous diagnosis made by alternative tests, but a positive result was confirmed only in one case. In other cases, the alternative tests were unable to identify correctly the responsible foods, or provided an unacceptable number of false positives. As a general consideration, the high rate of false positive results leads to time-consuming and useless consultations, with a not negligible resource wasting. Moreover, based on the results of the tests, inappropriate diets were prescribed to many patients. In everyday clinical practice, patients should be advised of the risks and drawbacks of alternative diagnostic techniques (3), especially in the case of suspected food related symptoms.

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Allergic contact dermatitis from buprenorphine

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Key words: buprenorphine; contact dermatitis; patch test; transdermal delivery system.

Transdermal delivery of drugs is becoming increasingly popular. Buprenorphine transdermal delivery system (TDS) was developed for the treatment of moderate-to-severe cancer pain and severe pain, which does not respond to nonopioid analgesics (1).

Treatment of severe pain.

A 70-year-old non-atopic woman without any history of adverse reaction to drugs was referred to our Allergy Unit. In May 2004, her doctor prescribed a transdermal patch (Transtec®, Grünenthal GmbH, Aachen, Germany, 35 µg/h) as treatment for widespread chronic pains. About 10 h after application, she complained itching in the contact zone. These symptoms disappeared in approximately 15 days after treatment with a corticosteroid ointment. In July 2004, after a new application of the transdermal patch, she noted itching and erythema in the contact zone.

The contact battery recommended by the International Contact Dermatitis Research Group (ICDRG) (2) was utilized. We patch tested with the Transtec® (as is) patch and their ingredients, and 0.005 and 1% aq. of buprenorphine. Readings were taken at 48 and 96 h. Six control patients were tested to the Transtec® patch.

Patch testing to Transtec® (as is) and 0.005 and 1% aq. of buprenorphine was positive at 48 and 96 h. The zone corresponding to the buprenorphine patch disclosed erythema with infiltration and blebs with small central blisters. The other contact substances yielded negative results. Six control patients tested negative to the Transtec® patch. The final diagnosis was contact dermatitis from buprenorphine.

Buprenorphine is a low-molecular weight, lipophilic and opioid analgesic. Transdermal buprenorphine was generally well-tolerated (3). Systemic adverse events were typical of opioid treatment or were attributable to the underlying disease (0.005 and 1% aq. of buprenorphine). To our knowledge, there are no reported cases of contact hypersensitivity to buprenorphine. We described the first case of contact dermatitis from buprenorphine.