

Leukotriene receptor antagonists in chronic urticaria

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Key words: chronic urticaria; leukotriene receptor antagonists; leukotrienes; montelukast; therapy; zafirlukast.

• SOME patients with chronic idiopathic urticaria (CIU) do not respond to antihistamines and require long-term steroid administration or even cyclosporin to control their disease. Recently, several studies reported good results with antileukotriene drugs in CIU (1–4); however, a prospective investigation aiming to detect which patients are more likely to benefit from antileukotriene treatment has not been carried out yet.

Twelve consecutive patients with unremitting, steroid-dependent urticaria were studied. Clinical features and results of the main laboratory investigations are

shown in Table 1. Montelukast 10 mg once a day ($n=5$) or zafirlukast 20 mg twice a day ($n=7$) was started. The usual therapies were not changed at the start of the scheduled 3-week treatment period, but patients were left free to reduce or withdraw antihistamine treatment in the case of a remission of the disease. Patients recorded both the severity of urticaria and the drugs used, and were followed up weekly. The primary end point of the study was an adequate control of the disease, defined as absence or marked reduction of pruritus and urticaria without the need for systemic steroid therapy.

One patient was excluded because of intolerance of both montelukast and zafirlukast (severe headache). Six of the remaining 11 patients (55%) responded to zafirlukast ($n=3$) or montelukast ($n=3$) (Table 1). In these subjects, leukotriene receptor antagonists (LRA) induced a nearly total remission of the disease: four could easily control their urticaria with cetirizine 10 mg every other day, and two could discontinue antihistamine treatment altogether. The effect of LRA was already appreciable after some days of treatment. Responders have now been followed up

for 6–24 months; they are still taking LRA and are all still in remission. No clinical feature or specific “marker” (sex, age, duration of the disease, NSAID intolerance, autologous serum skin test [ASST] result, thyroid autoimmunity, or histamine-releasing activity of serum) was associated with the response to LRA (Table 1).

Leukotrienes might well play a central pathogenic role in some patients with CIU. Their injection into human skin produces a wheal and flare reaction (5), and, on a molar basis, they are 100 times more potent than histamine; moreover, serum from some patients with CIU, particularly those positive on ASST, induces both histamine release and *de novo* production of sulfidoleukotrienes in human basophils (6).

Interestingly, in one study (3), one nonresponder to LRA showed a complete response to the lipoxygenase inhibitor, zileuton, suggesting a possible pathogenic role for LTB₄, a substance that enhances cutaneous microvascular permeability by a not yet identified neutrophil-derived mediator (7). Because zileuton is not available in Italy, we could not confirm these observations.

Good result in 50% of cases of therapy resistance.

Table 1. Clinical features of patients studied

Patient no.	Sex/age (years)	DD (mo)	NSAID intolerance	ASST	HRA	Thyroid autoimmunity	LRA used	Outcome
1	F/59	160	Yes	Pos	ND	Neg	M	Remission
2	M/47	30	Yes	Neg	ND	Neg	Z	Unchanged
3	F/59	24	Yes	Pos	9.5%	Neg	M	Remission
4	F/37	80	Yes	ND	ND	Neg	Z	Unchanged
5	F/21	150	Yes	Pos	ND	Neg	M/Z	Not tolerated
6	F/26	150	Yes	Pos	ND	Neg	Z	Remission
7	M/61	16	No	Pos	Negative	Pos	Z	Remission
8	F/79	70	No	Pos	ND	Neg	Z	Remission
9	M/22	24	No	Pos	Negative	Neg	Z	Unchanged
10	M/62	3	No	Pos	ND	Neg	Z	Unchanged
11	M/26	96	No	NE	ND	Neg	M	Unchanged
12	F/62	48	No	Neg	6%	Neg	M	Remission

DD (mo): disease duration (months); ASST: autologous serum skin test results; LRA: leukotriene receptor antagonist (M: montelukast; Z: zafirlukast); HRA: histamine-release assay (positive if >5%); NV: not evaluable due to severe dermatographism (ID test with saline positive); ND: not done.

This study suggests that, in view of their good tolerability and low cost, LRA should be tried in all patients with unremitting, steroid-dependent chronic urticaria before more challenging therapies, such as IVIG or cyclosporin, are considered.

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Allergy to linden pollen (*Tilia cordata*)

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Key words: linden allergens; linden pollen allergy; rhinoconjunctivitis; *Tilia cordata*.

● ALLERGY to linden pollen (the most common species is *Tilia cordata*) has not been previously documented.

We present the case of a pollinic patient sensitized to linden pollen.

A 21-year-old woman was diagnosed 10 years ago as having rhinoconjunctivitis and asthma caused by olive and grass

pollen. After 6 years of specific immunotherapy, she experienced clinical improvement.

However, every June, during the last 4 years, she reported nasal,

ocular, palatine, ear, and pharynx pruritus; conjunctival hyperemia; sneezing; and night cough. She related it to the flowering of a linden tree near her house. She was asymptomatic in June when she was away from home.

Her white cell count and differential blood count were normal. The total IgE (Pharmacia CAP) was 334 kUA/l. The skin prick test (SPT) to extract of *T. cordata* pollen (5% w/v) was positive (11×17 mm). SPT was also positive to

A specific linden-pollen allergen of ~50 kDa has been detected.

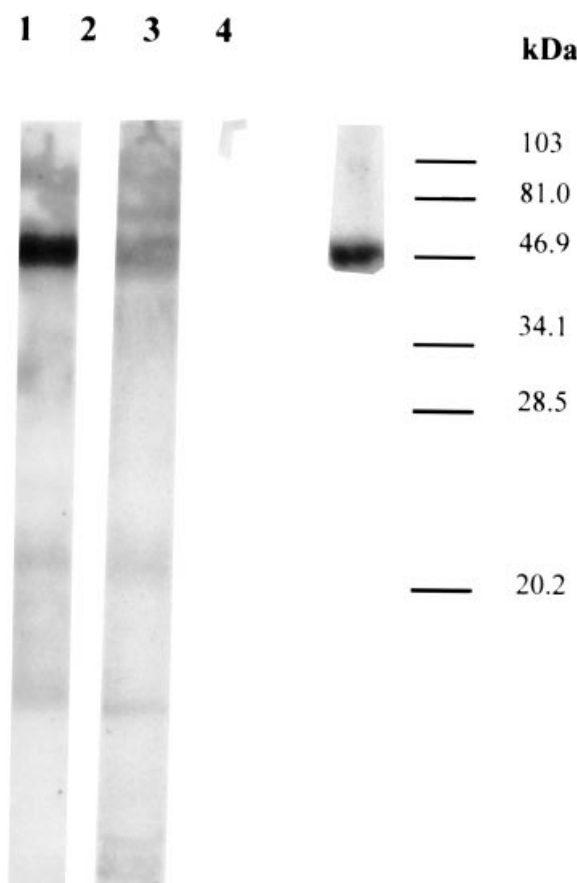


Figure 1. IgE immunodetection experiment: lane 1) *Tilia* extract; 2) *Platanus* extract; 3) negative control; 4) inhibition of *Tilia*-IgE immunodetection with *Platanus* extract.