

Urticarial vasculitis with a positive autologous serum skin test: Diagnosis and successful therapy

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Key words: autologous serum skin test; hashimoto thyroiditis; pernicious anemia; urticarial vasculitis.

Urticarial vasculitis (UV) is a chronic disorder consisting of episodic urticarial or angioedematous lesions that histologically manifest features of leucocytoclastic vasculitis. There is an idiopathic and a secondary form. Secondary UV is associated with autoimmune connective tissue disease, such as systemic lupus erythematosus and Sjögren's syndrome, viral infections (e.g. hepatitis B and hepatitis C), neoplastic processes, such as multiple myeloma and drugs (1). However, a routine procedure in detection of autoimmune urticaria, testing with autologous serum skin test in patients with UV has, to our knowledge, so far not been published.

A 36-year-old female Turkish patient presented with a 6-week history of recurring painful wheals on the entire body surface. The individual lesions persisted a day. She had no arthralgias, abdominal pain or fever, but she complained about a reduced general condition. The patient had no history of recent infection, fever, atopy or new medication. Treatment by her general practitioner with oral corticosteroids and later with several antihistamines, among them

desloratadine and hydroxyzine, had not led to clinical improvement. One year ago, a pernicious anaemia (PA) had been diagnosed with positive antiparietal cell antibodies and vitamin B12 therapy was initiated.

The skin examination revealed urticaria-like, occasionally indurated erythematous, circumscribed wheals (0.5–1.5 cm in diameter) and hyperpigmented macules (Fig. 1A) on the entire body surface, with the lower extremity as the

most prominent site. The wheals persisted for more than 24 h and partly revealed purpura on blanching; dermographism was normal. The general examination was without pathological findings.

The following parameters were abnormal: erythrocyte sedimentation rate (ESR) with 23 mm in the first hour (<20), blood urea nitrogen (BUN) with 21 mg/dl (7–18), lactate dehydrogenase (LDH) with 275 U/l (135–214), C4 with

First case of urticarial vasculitis with a positive autologous serum skin test associated with pernicious anaemia and Hashimoto's thyroiditis.

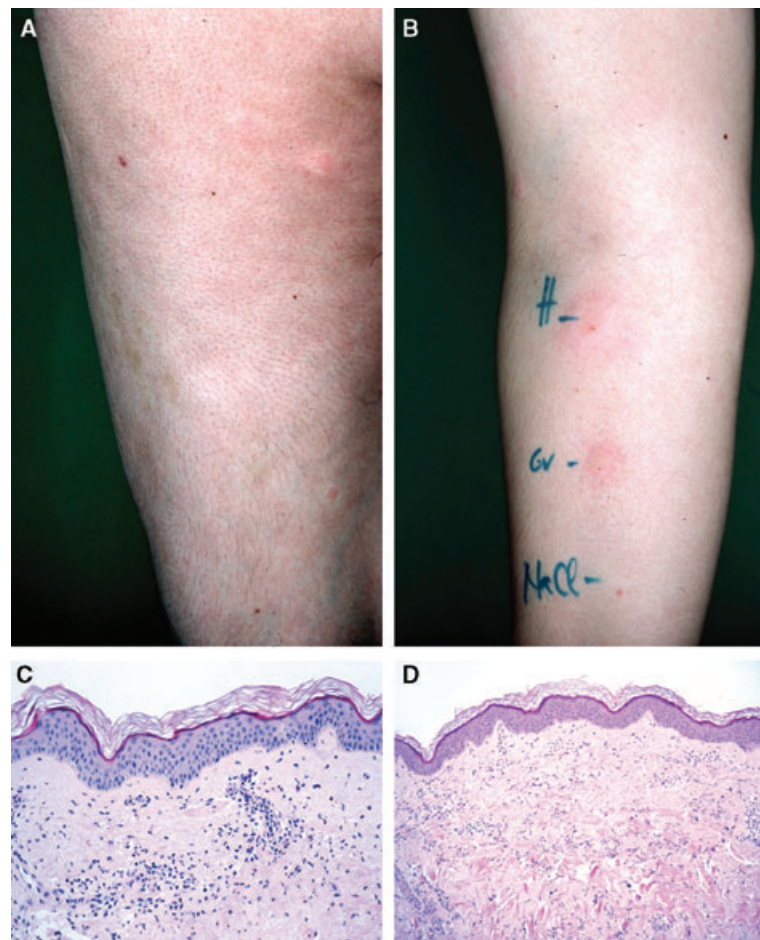


Figure 1. (A) Wheals and hyperpigmented macules of the left thigh in a patient with urticarial vasculitis. (B) The positive autologous serum skin test (ASST) 20 min after testing (H, histamine; Gr, Greaves test: serum diluted 1 : 10, NaCl : saline). (C, D) Histological findings of a wheal (C) and of the positive ASST (D, 2 days after testing) revealing leucocytoclastic vasculitis.

47 mg/dl (10–40), albumin with 56.3% (60.6–68.6) and γ -globulins with 21% (12.1–17.7). Thyroid-stimulating hormone (TSH) was increased with 4.2 mU/l (0.1–4.0); FT4 and FT3 were normal, but hTg (110 U/ml) and thyroid peroxidase (TPO) (4355 U/ml) antibodies were positive. IgG and C3c circulating immune complexes were increased, with normal IgA and IgM immune complexes. Normal or negative were complete blood count (CBC), C-reactive protein (CRP), C3, anti-nuclear antibodies (ANA), anti-neutrophil cytoplasmic antibodies (ANCA), hepatitis serology and glucose-6-phosphate-dehydrogenase (G-6-PDH). The anti-streptolysin titre was elevated; the patient, however, showed no clinical signs of infection. Urine analysis revealed a microhaematuria and proteinuria, but 24 h urine protein was normal. Chest X-ray and abdominal echography were without pathological findings.

We performed an autologous serum skin test (ASST; Greaves test) (2), which was positive; saline showed no reaction (Fig. 1B). A biopsy of a wheal showed features of leucocytoclastic vasculitis (Fig. 1C). The ASST remained over 0.8 cm in size over 2 days. Biopsy revealed a leucocytoclastic vasculitis (Fig. 1D).

Based on the clinical and the laboratory findings, the diagnosis of UV associated with PA and Hashimoto's thyroiditis (HT) was made. We started a therapy with levocetirizine 5 mg/day, rofecoxib 25 mg/day, montelukast 10 mg/day, levothyroxine 50 μ g/day and selenium 50 μ g b.i.d. Over a period of 4 weeks our patient responded partially to this treatment. We replaced rofecoxib and montelukast by chloroquine 250 mg/day and after 2 weeks of treatment our patient was completely free of symptoms. After 2 months, chloroquine was given as monotherapy and after a follow-up examination after 6 months, the patient was still asymptomatic. The treatment was well tolerated.

Although frequently associated with autoimmune diseases, this is the first reported case of UV associated with PA and HT. A case of chronic angioedema of the tongue associated with PA and HT was previously published (3).

Histamine-releasing anti-FcepsilonRIalpha autoantibodies, which are associated with positive skin test responses to autologous sera in patients with chronic idiopathic urticaria (4), have been reported in one patient with UV (5). The ASST has a sensitivity of approximately 70% and a specificity of 80% for detection of patients with autoimmune urticaria (2). Although *in vitro* tests seem less sensitive than ASST in the detection of patients with histamine-releasing factors in the blood (6), to our knowledge there are no published cases of positive ASST in UV.

The findings of a positive ASST with clinical and histological findings of vasculitis have previously not been described. Its occurrence along with circulating immune complexes of IgG and C3c make a pathogenetical role of circulating immune complexes in this patient highly possible. The ASST might be a useful adjunctive test in detecting the underlying pathophysiology in UV; further investigations in this interesting field are required.

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Occupational asthma and allergy to sevoflurane and isoflurane in anaesthetic staff

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Isoflurane has caused contact dermatitis in an anaesthetist (1), and dermatitis is common in anaesthetic workers (2). However, there are no prior reports of occupational asthma.

We report three cases with occupational asthma, work-related angioedema or dermatitis to *isoflurane* (1-chloro-2,2,2-trifluoroethyl difluoromethyl ether) and *sevoflurane* [fluoromethyl 2,2,2-trifluoro-1-(trifluoromethyl) ethyl ether] with positive specific bronchial provocation testing. All worked as anaesthetic assistants or nurses in the same hospital.

Bronchial provocation testing: Sequentially increasing exposures to sevoflurane and isoflurane were delivered on separate days via mask attached to an

The first report of occupational asthma and rhinitis from isoflurane and sevoflurane in anaesthetic staff.