Why test for autoreactive urticaria?

- Confirmation of diagnosis and cause of the condition is helpful for patients.
- Anxiety about food related allergy can be excluded.
- Helps with clinical management – increased antihistamines will be required for symptom control.
- Patients may have this condition for a longer duration of time.
- Other autoimmune disorders may need to be excluded.

What is chronic spontaneous urticaria?

Chronic spontaneous urticaria is a common skin disorder characterised by recurrent, transitory, itchy wheals, defined by the daily or almost daily occurrence of wheals for a period of at least 6 weeks. Chronic spontaneous urticaria is an extremely distressing and disabling condition for the patient. A study has reported that the degree of disability experienced by a chronic urticaria patient – personal, social and occupational – is comparable with that of patients with severe coronary artery disease awaiting surgery.

The diagnosis ‘chronic spontaneous urticaria’ (CSU) is used in situations in which urticarial vasculitis and predominant physical urticarias have been excluded. In 1986, Grattan et al. reported the presence of a serum factor that caused whealing upon autologous intradermal injection (autologous serum skin test, ASST) in some patients with CSU. However the autoimmune dimension of CSU became apparent only in 1993 when Greaves and colleagues identified this factor as an IgG with specificity for the α-chain of the high-affinity IgE receptor (FcεRIα). The presence of anti-FcεRIα, ranging from 25 to 45% of the total patients with CSU, was demonstrated by many to be the causative autoantibody that results in mast cell degranulation.

Histamine Releasing Urticaria Test (HR-Urticaria Test)

Chronic spontaneous urticaria (CSU) affects at least 0.1-3.0% of the population and has a chronic relapsing course with approximately 20% of patients still having the disease after 10 years. Approximately 30-35% of CSU patients, including children, may have circulating autoantibodies against IgE or the α subunit of the high-affinity IgE receptor (FcεRIα) demonstrated by HR-Urticaria Test. CSU is extremely distressing and disabling – the degree of disability experienced by a chronic urticaria patient – personal, social and occupational – is considered to be comparable with that of patients with severe coronary artery disease awaiting surgery.

Serum induced histamine release is therefore considered the only laboratory method to demonstrate both mast cell activating autoantibodies and other mast cell activating signals. TDL refers this test to RefLab, Denmark.

Methodology

This autoreactive form of CSU is diagnosed by serum induced histamine release from basophils. 1-2 mL of serum is drawn from the patient. Histamine release is measured from stimulated and unstimulated cells and the results are expressed as histamine release in percentage of the total histamine content. A histamine release > 16.5% is a positive test result in both children and adults.
The data show that overall 19.7% were positive for HR-Urticaria Test. Women were tested more frequently than men, and the share of positive reactions was more frequent with women (21.7%) compared to men (15.6%). These data show a lower incidence that is reported in the international literature. Most of these reports, however, are of smaller patient materials from selected clinics, in contrast to the data reported from a Scandinavian service laboratory, which are based on samples from an unselected population.

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Test information
HR-Urticaria Test for detection of autoreactive urticaria.

<table>
<thead>
<tr>
<th>Test</th>
<th>Code</th>
<th>Sample type</th>
<th>Turnaround Time</th>
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<tbody>
<tr>
<td>Histamine Releasing Urticaria Test</td>
<td>CURT</td>
<td>1 x SST/Serum</td>
<td>up to 15 days</td>
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</tbody>
</table>

A histamine release > 16.5% is a positive test result in both children and adults.

This test is £87.00. This includes charges for referral to RefLab, Denmark.

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Summary of 11087 incoming sera tested for autoreactive urticaria in HR-Urticaria Test*
Age & Sex distribution of patients with a positive HR-Urticaria Test (n:2189)

<table>
<thead>
<tr>
<th>Age groups</th>
<th>Number of patients</th>
</tr>
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<tbody>
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<td>0-10</td>
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<tr>
<td>11-20</td>
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<td>81-90</td>
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<tr>
<td>91-100</td>
<td>150</td>
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</tbody>
</table>

*Source: RefLab ApS/DK/May 2010

References