



Urticaria

BACKGROUND Urticaria is a very common problem that affects most of the population at some time. Acute urticaria is often allergy based and self limiting. In chronic urticaria, it is uncommon to find an allergic cause and in most cases, it is more useful to consider it as an autoimmune disease.

OBJECTIVE This article reviews the assessment of urticaria and outlines a treatment plan for chronic urticaria.

DISCUSSION In most patients, urticaria is acute and self limiting and settles with the aid of antihistamines. Chronic urticaria is more challenging for both the doctor and patient. A careful history is important in identifying allergic causes and aggravating factors. In severe cases, immunosuppressive therapy may be required.

Most of us will experience urticaria at some stage in our life. Most cases of acute urticaria have an obvious cause such as an insect bite or food allergy and resolve within a few days. Although many patients with acute urticaria possibly do not consult a general practitioner, urticaria will still be seen quite frequently in general practice.

General considerations

History

Even though urticaria is usually an obvious clinical diagnosis, a careful history is still important to identify a possible trigger or aggravating factor. Specifically ask the patient about:

- bites – mosquitoes, sandflies, pet fleas (does the cat sit on your lap?)
- drug intake – both prescription and nonprescription. In particular, antibiotics, aspirin, nonsteroidal anti-inflammatory drugs (NSAIDs), codeine, laxatives,

and angiotensin converting enzyme (ACE) inhibitors can all be associated with urticaria

- food intake – patients will almost always consider something in their diet as the cause of their urticaria. Many patients will have tried various dietary manipulations. Food allergens are well recognised as a cause of acute urticaria and are more common in young children and infants.¹ Food allergens become less common as a cause of urticaria in adults. Common food allergies include peanut butter, strawberries, cow's milk, fish and eggs. Most food allergens cause urticaria within half an hour of the offending food being eaten, and the reaction is reproducible. The vast majority of children grow out of these allergies, however, peanut allergy – and other nut allergies – can persist for many years, and in some cases, for life
- infection – viral infections are a common cause of urticaria in children.¹ Bacterial infections such as *Escherichia coli* can also trigger urticaria.¹ Consider less obvious infections such as chronic sinusitis or a tooth abscess
- duration of lesions – individual lesions typically last for less than 24 hours
- bruising – bruising is not a usual feature of urticaria and may indicate an underlying vasculitis
- physical causes – exposure to cold, pressure, vibration, exercise and sun, can all cause urticaria.²

Chronic urticaria is defined as that lasting longer than 6 weeks. It is a frustrating condition for both patient and doctor. It is unusual to find a specific cause for chronic urticaria,³ however, it is still important to ask the patient about the above possible triggers. Aggravating factors also need to be identified.

Examination

Typical urticaria has a distinctive appearance of raised pink papules and plaques scattered randomly anywhere



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Figure 1a, b. Urticaria

on the body (*Figure 1a, b*). Check the surface of the lesions – the epidermis should be normal.² If scaling or weeping are present, it is not urticaria. In this case, consider urticarial eczema or prodromal bullous pemphigoid.

Investigations

In acute urticaria with an obvious trigger, no investigations are required. However, in chronic urticaria limited investigations can be useful. If lesions last longer than 24 hours and are tender with signs of bruising, skin biopsy of a new lesion for histology and immunofluorescence can help identify vasculitic urticaria.² Most cases of chronic urticaria will remain idiopathic, however, the following limited investigations are worth considering:

- full blood count (iron deficiency can be an aggravating factor) and erythrocyte sedimentation rate (ESR)
- creatinine and electrolytes
- liver functions tests, and
- thyroid function.

Patients with a suspected food allergy as the cause of urticaria require definite diagnosis through a placebo

controlled, oral challenge test.³ The area of diet, allergy, food intolerance and nonallergic triggers is still poorly understood, and this lack of knowledge is worth discussing with the patient. Some patients benefit from an elimination diet – even if it is to rule out specific causes. The Royal Prince Alfred Hospital (New South Wales) provides a useful elimination diet booklet (see *Resource*).

Treatment

Acute urticaria usually lasts a few days, even if the cause has not been identified. Usually no treatment is required, however short term relief can be gained from cool baths and compresses, calamine lotion and antihistamines (sedating or nonsedating).

Chronic urticaria is far more challenging for the GP. There is considerable evidence that auto-antibodies are involved in many cases of chronic urticaria. If specific allergic causes and aggravating factors have been ruled out, it is worth considering chronic urticaria as an autoimmune disease.⁴ Explaining this theory can be useful to the patient, as it moves away from the idea of

a specific allergy.

Some patients with chronic urticaria will gain good relief with antihistamines. The following is a suggested step wise approach to treatment:

- avoid aggravating factors such as excessive heat and alcohol. It is worth spending time taking a full drug history including over-the-counter drugs and drugs taken intermittently. Drugs that lower the threshold for urticaria include aspirin, NSAIDs, ACE inhibitors and codeine, and these should be avoided. NSAIDs and codeine containing compounds are readily available without prescription, and may be used for treatment of common conditions such as headache and period pain
- topical relief with cool baths, calamine, compresses, and menthol cream; topical corticosteroids are not helpful
- antihistamines – individual response to antihistamines can vary; try different ones to find the best result. Nonsedating antihistamines are usually the easiest to use, but can become expensive with long term use. Consider:
 - terfenadine 180 mg per day
 - loratidine 10 mg per day
 - promethazine 10–75 mg per day
 - dexchlorpheniramine 2–6 mg per day, or
 - azatadine 1 mg every 12 hours
- consider adding an H2 antagonist (eg. cimetidine 800 mg twice per day or ranitidine 150 mg twice per day), a calcium antagonist (eg. nifedipine) or a leukotriene antagonist (eg. montelukast)
- if there is still insufficient relief, an immunosuppressive agent should be considered. The easiest to use is prednisolone (eg. 3–4 week course starting at 25–50 mg a day and tapering). This may induce remission, however, if the urticaria flares on withdrawal, it is advisable to avoid long term oral steroid use because of the inevitable side effects. In this case, it is worth considering another immunosuppressive agent (eg. azathioprine, methotrexate or cyclosporine). A second opinion or referral would be appropriate. Careful monitoring and follow up will be required.

Urticaria and angioedema

Urticaria and angioedema are often confused. Urticaria can produce marked swelling of the lips, eyes and throat, but this is not angioedema. Anaphylaxis can produce urticaria and airway obstruction that requires urgent treatment with adrenaline. Classic triggers

include peanuts (and other nuts) and antibiotics.

Angioedema is quite different. It is characterised by recurrent attacks of oedema in the skin, mucosae, and gastrointestinal and respiratory tracts. Angioedema is not itchy, and swelling may last for days. Angioedema is due to a functional deficiency of the activated first component of complement. It can be inherited or acquired and attacks can be prevented with stanazolol or danazol. Acute attacks of angioedema do not respond to adrenaline (an important point when dealing with an emergency presumed to be anaphylactic and not responding to adrenaline). Treatment for angioedema is with fresh, frozen plasma and activated complement (CTINH).

Resource

The Royal Prince Alfred Hospital Allergy Unit. Elimination diet booklet. Available for purchase at: <http://www.cs.nsw.gov.au/rpa/Allergy/resources/foodintol/booklets.cfm>.

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References

1. Mortureux P, Leaute-Labreze C, Legrain-Lifermann V, et al. Acute urticaria in infancy and early childhood: a prospective study. *Arch Dermatol* 1998;134:319–323.
2. Freedman IM, Fitzpatrick TB, eds. In: *Fitzpatrick's dermatology in general medicine*. 4th edn. New York: McGraw-Hill, 1993;1483–1493.
3. Sabroe R, Greaves M. The pathogenesis of chronic idiopathic urticaria. *Arch Dermatol* 1997;133:1003–1008.
4. Gach J, Sabroe R, Greaves M, Black A. Methotrexate responsive chronic idiopathic urticaria: a report of two cases. *Br J Dermatol* 2001;145:340–343.

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