

Module 1757

Urticaria

From this module you will learn about:

- Causes and symptoms
- Impact on quality of life
- Treatment and when to refer
- Sources of information and advice pharmacists can give patients

August

Clinical: Skin

● Scars and stretch marks	August 1*
● Urticaria	August 8
● Warts and verrucas	August 15*
● Baby skincare	August 22
Practice: Changes in employment law August 29	

*Online only for Update Plus subscribers

Nancy Kane

Senior medical information pharmacist

Urticaria, also commonly known as hives or nettle rash, is an itchy erythematous rash associated with superficial swelling of the skin. It usually appears red and blotchy and can be either confined to one area or more generalised, covering large areas of the body. Anyone can be affected, but the condition is commonly seen in children. Urticaria is also particularly prevalent in women aged 30 to 60 years.

Acute urticaria is the most common form of the condition, affecting roughly one in six people (15%), at some point in their lives. In these cases, symptoms normally appear suddenly and reach a peak after eight to 12 hours. Most cases resolve within around 24 hours, and can occasionally take up to 48 hours, but any bout lasting less than six weeks is still regarded as acute.

By contrast, chronic urticaria, which includes any case lasting more than six weeks, affects only one in 1,000 people in their lifetime. Bouts of chronic urticaria tend to last six to 12 weeks and are interspersed with periods that are either symptom-free, or at least associated with less severe symptoms. A small number of chronic urticaria patients - around 10 per cent - have symptoms that are always present.

Urticaria can have a profound effect on quality of life, particularly if it is chronic or severe. The itch is distressing and can have a severe effect on both the quality and quantity of sleep. Some people also find the appearance embarrassing and, as a result, become somewhat socially isolated. All of these factors combined contribute to impaired social life and time off work. So how can pharmacists help sufferers manage the condition?

Causes, symptoms and diagnosis

Urticaria has a variety of causes, but the mechanism in each case is thought to be the same. Mast cells - a type of white blood cell - are found all over the body, but are particularly associated with tissues exposed to the external environment, including the skin. These cells contain granules filled with a variety of substances that are released during an immune response, including proteases, cytokines and histamine. When this happens in the skin,



Urticaria, also known as hives or nettle rash, is commonly seen in children

urticaria can result. The release of histamine, in particular, is thought to be a key contributor to urticaria due to its roles in vasodilation and promoting capillary leakage.

Because the symptoms of urticaria are so characteristic, a diagnosis can usually be made by taking a history and examining the rash.

Urticaria typically presents as a rash that is raised from the skin due to localised swelling in the epidermis. The swelling is caused by plasma leaking from capillaries in response to histamine release, and forms lesions or wheals that can vary in size from a few millimetres across to several centimetres in diameter.

Clusters of wheals may cover large portions of the body or be localised to a single area. The wheals are usually intensely itchy, which can be a source of considerable distress.

Due to its recognisable appearance, investigations are not usually required.

However, if the history is not clear enough to identify a cause, some blood tests may be useful in ruling out other sources of itch – for example, liver and thyroid function testing may be enlightening.

Up to half of urticaria cases are idiopathic, meaning that a cause is never identified. The remainder are split between immunological and non-immunological cases.

Immunological urticaria is probably the most familiar, and is thought to be caused by the immune system activating mast cells via immunoglobulin E (IgE). Examples include the classical type one hypersensitivity reactions such as food allergies, insect bites and stings, and adverse reactions to medicines.

Unfortunately, the trigger is not always identifiable, particularly if an obscure additive in a food, medicine or cosmetic is to blame. It can also be problematic if the cause is identified as a common excipient in drugs, such as a colouring or preservative. Infections can also cause immunological urticaria, as can autoimmune reactions.

Non-immunological urticaria is perhaps less familiar and is thought to be caused by physical stimuli directly activating mast cells. Everyday conditions such as heat, cold, temperature changes or exposure to sunlight can cause symptoms and, in rare cases, exposure to water can also trigger an outbreak.

There are other forms of non-immunological triggers. The condition dermatographia is a form of physical urticaria in which the rash is caused by simply applying physical pressure; the name is derived from the fact that sufferers are able to spell out words on their skin using urticarial wheals (see *Practical Approach, Written on the skin*, online at chemistanddruggist.co.uk/update-plus). Finally, some drugs, such as opiates, non-steroidal anti-inflammatory drugs (NSAIDs) and angiotensin converting enzyme (ACE) inhibitors, can cause urticaria without any immunological involvement by acting directly on mast cells.

Management of urticaria

It is easiest to manage urticaria if the cause can be identified. In these cases, the trigger should be removed, if possible, or avoided. Persistent or recurrent urticaria can be triggered or exacerbated by various factors, which again should be avoided. (see *Triggers of persistent urticaria*, above).

Patients can take cool baths or showers, for example, to manage urticaria that is exacerbated by heat.

But, in some cases, formal treatment is needed. The first-line choice for most

Triggers of persistent urticaria

Persistent or recurrent urticaria can be triggered or exacerbated by various factors that may be difficult to identify, but commonly include:

- any stimulus that promotes vasodilation, such as alcohol, caffeine or heat
- foods that may have vasoactive properties or promote histamine release, including strawberries, pineapple, tomatoes, fish and shellfish, or chocolate
- foods or medicines containing salicylates, including orange juice, raspberries, tomatoes, tea and spices
- certain medicines, including NSAIDs, opiates and ACE inhibitors
- stress



people with urticaria is an oral non-sedating antihistamine such as cetirizine, loratadine or fexofenadine, taken at the standard licensed dose. There is no evidence to suggest more recent alternatives such as desloratadine or levocetirizine offer any advantages over the more established class members, so they are not generally recommended. Topical antihistamines are also not recommended due to the risk of sensitisation, which can lead to contact dermatitis.

The duration of treatment should be individualised according to factors such as the cause of the urticaria (if known) and duration of symptoms. For cases that are likely to be brief and unlikely to recur, antihistamines may be prescribed as required until symptoms settle. For patients whose symptoms are likely to persist or recur, treatment should be taken regularly for up to six weeks.

If the first choice of antihistamine is not effective, there are several other options. A second non-sedating antihistamine may be tried, which may better suit individual differences in tolerability and efficacy. Alternatively, the dosage may be increased to up to double the licensed dose, although such use should usually be initiated by a specialist. Cetirizine has been used at dosages of up to 60mg, and fexofenadine at up to 720mg daily in divided doses. Such doses should be avoided in children and in people with hepatic or renal impairment, or long QT syndrome.

Sedating histamines should generally be avoided for daytime use because the sedative effects can disrupt daily activities – particularly driving and other tasks that require alertness. However, a sedating antihistamine such as chlorphenamine may be prescribed to be taken at night, in addition to daytime non-sedating treatments, if symptoms are disturbing sleep.

Topical treatments can help treat itching, although they are not recommended by Nice

as a first-line treatment. Calamine lotion can be soothing, but should be used with caution since some people find that the residue it leaves on the skin is also an irritant, causing further problems. Menthol 1% in aqueous cream can also be beneficial because of the cooling sensation it provides; several over-the-counter products are available.

For those with severe urticaria, a short course of oral corticosteroids should be considered. Prednisolone 40mg for three to five days is recommended, although lower doses may be effective. Longer or repeat courses are not advocated due to the risk of adverse effects and concerns around establishing a pattern of long-term use. Topical steroids are also not recommended; although they can be of benefit in reducing urticarial rash, use over long periods or large surface areas increases the risk of adverse effects.

Patients with urticaria that is not well controlled, despite all of the above measures, should be referred to a specialist in dermatology or immunology. Patients requiring continuous oral antihistamines for more than six weeks should also be referred, as should those suspected of having severe acute urticaria caused by allergy to food or latex.

There are no other licensed options for urticaria that does not respond to antihistamines. Specialists in secondary care may prescribe a trial of a leukotriene receptor antagonist such as montelukast or zafirlukast, but these do not provide adequate control for all patients.

Nice recently recommended omalizumab (Xolair) – an antibody that targets IgE – for use in some people with chronic urticaria that has not responded to conventional therapy or to a leukotriene receptor antagonist. It is administered by subcutaneous injection every four weeks and, while it is associated with improvements in symptoms and quality of ▶

life, there is limited clinical evidence for use beyond six months.

Advice pharmacists can offer

Many of the treatment options for urticaria are available in pharmacies as general sale items or over-the-counter products. This gives pharmacists a lot of scope to support patients in treating their urticaria by advising on the use of sedating and non-sedating antihistamines and appropriate topical preparations. However, some cases should always be referred for medical assessment:

- Urticaria that occurs with suspected anaphylaxis is a medical emergency; call an ambulance and give appropriate supportive care in the meantime
- Urticaria with angio-oedema - swelling that occurs in deeper layers such as the dermis and subcutaneous tissue - should always be assessed by a doctor and will usually need daily review. Patients with oedema that is evolving rapidly should be seen in hospital either by emergency admission arranged by a GP or by presenting directly to A&E
- Symptoms that are painful and persistent may need to be seen by a dermatologist - patients should see their GP to assess the need for referral
- Chronic urticaria that has lasted more than six weeks despite optimal treatment with antihistamines
- Symptoms that are widespread or severe should be assessed by a GP, who can assess whether a short course of corticosteroids is appropriate.

Pharmacists can also offer advice on identifying potential causes of urticaria, and avoiding stimuli that may trigger or worsen an attack. Because heat can induce urticaria, simple measures such as taking a cooler shower than normal, or reducing the temperature in bedrooms, may make a big difference.

Together with advice on avoiding potential triggers, simple reassurance that in most cases the symptoms resolve within hours or days may be of benefit to many patients.

Additional advice

There is a lot of good quality patient information available on urticaria. Both the NHS Choices and Patient websites offer clear, useful information for patients, outlining the causes, symptoms and recommended management.

Because the cause of urticaria can sometimes be hard to identify, a symptom diary may be useful for some people. A sample diary is available (see *App of the Week*, above right), but a simple daily list of symptoms and possible triggers (including food, medicines, and so on) may be a good place to start.

References are available on the next page

ONLINE PREMIUM CPD CONTENT EXCLUSIVELY FOR UPDATEPLUS SUBSCRIBERS

Practical Approach

Written on the skin

A young man is looking for advice on a baffling skin reaction. What would you suggest?

chemistanddruggist.co.uk/update-plus



5-Minute Test

Update module 1757: Urticaria

Sign up to take the test, get the answers marked online and download a log sheet to help with your CPD.

chemistanddruggist.co.uk/mycpd



Picture Quiz

Find out about fish odour syndrome

Test your knowledge of trimethylaminuria, which can blight sufferers' lives.

chemistanddruggist.co.uk/update-plus



App of the Week

Urticaria

Sufferers of this common skin condition can identify triggers using a diary.

chemistanddruggist.co.uk/update-plus



Not registered?

GET PREMIUM CPD CONTENT FOR JUST £1 PER WEEK

Buy UPDATEPLUS for £52+VAT

Visit chemistanddruggist.co.uk/update-plus to register and try before you buy

Tips for your CPD entry on urticaria

Reflect When is urticaria considered to be chronic? What is the recommended first-line treatment for urticaria? Which patients with urticaria should be referred?

Plan This article contains information for pharmacists about the causes and symptoms of urticaria and discusses its management with antihistamines, corticosteroids and topical treatments. Advice about avoiding triggers, when to refer and reliable sources of information is also included.

Act Read the Update article and the suggested reading (below), then take the 5 Minute Test (above). Update Plus subscribers can then access answers and a pre-filled CPD logsheet at chemistanddruggist.co.uk/mycpd.

Find out more about treating urticaria from **Clinical Knowledge Summaries (CKS)** tinyurl.com/urticaria2

Make sure all members of your pharmacy team are familiar with the causes and symptoms of urticaria, can recommend treatments and know when to refer

Evaluate Are you now confident in your knowledge of the causes and symptoms of urticaria? Could you give advice to patients about its treatment?

Expert Q&A

Want to know more? Our skin expert is on hand to answer any further questions you may have on this month's topic.

Email your queries to:

asktheexpert@updateplus.co.uk

References

- Nice Clinical Knowledge Summaries. Urticaria. Last revised December 2011. cks.nice.org.uk/urticaria (accessed July 2015).
- Nice Clinical Knowledge Summaries. Angio-oedema and anaphylaxis. Last revised June 2014. cks.nice.org.uk/angio-oedema-and-anaphylaxis (accessed July 2015).
- Patient Professional Reference: Urticaria. Last reviewed 13/01/2014. patient.info/doctor/urticaria-pro (accessed July 2015).
- Patient Health Information: Physical Urticarias (Hives). Last reviewed 13/01/2014. patient.info/health/physical-urticarias-hives (accessed July 2015).
- NHS Choices. Urticaria (hives). Last reviewed 21/03/2014. www.nhs.uk/conditions/nettle-rash/pages/introduction.aspx (accessed July 2015).
- Urb M, Sheppard DC. The role of mast cells in the defence against pathogens. *PLoS Pathogens* 2012;8(4) www.doi.org/10.1371/journal.ppat.1002619 (accessed July 2015).
- Spickett, G. Urticaria and angioedema. *J R Coll Physicians Edinb* 2014;44:50-4. <http://dx.doi.org/10.4997/JRCPE.2014.112> (accessed July 2015).
- Nice. Evidence Summary: Unlicensed or off-label medicines. Chronic urticaria: unlicensed doses of cetirizine. July 2014. www.nice.org.uk/advice/esuom31 (accessed July 2015).
- Nice. Technology Appraisal 339. Omalizumab for previously treated chronic spontaneous urticaria. www.nice.org.uk/guidance/ta339 (accessed July 2015).
- Summary of Product Characteristics: Xolair 150mg solution for injection. Date of revision of the text: 02 December 2014. www.medicines.org.uk/emc/medicine/24912 (accessed July 2015).

Urticaria Questions

1. Urticaria is particularly prevalent in women aged 30 to 60 years.
True/False?
2. A bout of acute urticaria can last up to six weeks.
True/False?
3. Three quarters of urticaria cases are idiopathic.
True/False?
4. Immunological urticaria is caused by physical stimuli directly activating mast cells.
True/False?
5. NSAIDs, opiates and ACE inhibitors can cause non-immunological urticaria.
True/False?
6. Desloratadine and levocetirizine have been shown to be more effective in reducing itching in urticaria than older non-sedating antihistamines.
True/False?
7. Topical antihistamines, calamine lotion and topical steroids are recommended by Nice as a first-line treatment for the management of urticaria.
True/False?
8. For people with severe urticaria, a short course of prednisolone 40mg for three to five days should be considered.
True/False?
9. Omalizumab, an antibody that targets IgE, has been recently recommended by Nice for the treatment of some people with chronic urticaria.
True/False?
10. Simple measures, such as taking a cooler showers or reducing bedroom temperature, may help ease urticaria symptoms.
True/False?