Urticaria and Angioedema in Children

What are the aims of this leaflet?

This leaflet has been written to help you understand more about urticaria and angioedema. It tells you what they are, what causes them, what you can do about them and where you can find out more about them.

What is urticaria and angioedema?

Urticaria is common, and affects up to 20% of people at some point in their lives. It is also known as hives or nettle rash. The short-lived swellings of urticaria are known as weals (see below) and typically clear within 24 hours.

Angioedema is a form of urticaria, where there is deeper swelling in the skin that may take longer than 24 hours to clear.

There are different types of urticaria of which the most common form is called ‘ordinary or idiopathic urticaria’. In this type no cause is usually identified and often patients have hives and angioedema occurring together.

Ordinary urticaria with or without angioedema is usually divided into ‘acute’ and ‘chronic’ forms. In ‘acute’ urticaria/angioedema, the episode lasts from a few days up to six weeks. Chronic urticaria, by definition, lasts for more than six weeks.

What causes urticaria and angioedema?

In the common ‘ordinary’ form of urticaria and angioedema, often no external cause to be identified. Intercurrent infections such as a cold, influenza or a sore throat may act as a trigger.

Almost any medicine can cause ‘acute’ urticaria, but painkillers (especially aspirin and medicines like ibuprofen), antibiotics (especially penicillins) and vaccinations are most likely to be responsible.
Symptoms of urticaria and angioedema

The main symptom of urticaria is itch but angioedema is not usually itchy. Although urticaria can be distressing because of the itching and its appearance, it has no direct effect on general health. Very rarely, the swelling of angioedema may affect the tongue or throat, causing difficulty with breathing or swallowing. This can be alarming but is rarely life-threatening.

The weals of urticaria may be flesh-coloured, pink or red. They can be of different shapes and sizes, but usually look like nettle stings. An important feature of urticaria is that although the rash may persist for weeks, individual lesions usually disappear within a day, and often last only a matter of hours. However, they sometimes leave bruising especially in children. New weals may then appear in other areas. In ordinary urticaria, the weals can occur anywhere on the body, at any time.

The deeper swellings of angioedema occur most frequently on the eyelids, lips and sometimes in the mouth, but they may occur anywhere. They are not usually itchy, and tend to settle within a few days. If the hands and feet are affected, they may feel tight and painful.

Diagnosis

Usually the appearance, (or a description), will be enough for your doctor to make the diagnosis. In the vast majority of people no cause can be found, although your doctor will ask you questions to try to identify one. There is no special test that can reliably identify the cause of ordinary (idiopathic) urticaria, but some tests may be done if your answers suggest an underlying cause.

If a trigger is suspected, a skin prick test may be performed to look for allergens, as in a small percentage of people, foods, colouring agents and preservatives appear to worsen urticaria, and it might be helpful to identify these by keeping a food diary.

If you have chronic urticaria (lasting for more than 6 weeks) your doctor will probably perform some blood tests to exclude an underlying associated problem (coeliac disease, thyroid problems) which is less common in children compared to adults.
Treatment & prognosis for Urticaria

The treatments outlined below suppress the condition rather than cure it. In about half of the people affected by chronic ordinary urticaria, the rash lasts for 6-12 months, however can last considerably longer. The natural history of chronic urticaria in childhood is for disease remission. Approximately 25% of children will achieve remission within the first 3 years of presentation.

Antihistamines block the effect of histamine, and reduce itching and the rash in most people, but may not relieve urticaria completely. If urticaria occurs frequently, it is best to take antihistamines regularly every day.

There are many different types including non-sedating and sedating antihistamines, in addition to short acting and long acting types. Your doctor may need to try different ones to find a regime that suits you best. The antihistamine tablets can to be taken for as long as the urticaria persists.

If antihistamine tablets are not helpful, your doctor may recommend other medicines, including other types of histamine blockers, or drugs such as montelukast, which is a treatment for asthma and although they may not be licensed for urticaria, they can be useful treatments.

Oral steroids can occasionally be given briefly for severe flares of acute and chronic urticaria, but generally are not necessary and should not be used frequently, unless supervised by a specialist.

Treatments that act by suppressing the immune system (e.g. ciclosporin) may be beneficial for the most severely affected people not responding to the treatments outlined previously. Very rarely, injections of adrenaline (epinephrine) may be required if there are breathing problems.

Self-care (What can you do?)

It is important to avoid anything that may worsen urticaria, such as heat and tight clothes. Avoidance of foods, colouring agents and preservatives may be helpful in the rare instances where these have proved to be a problem.

Seek medical advice urgently if you are having problems with breathing or swallowing.
Physical Urticarias

Urticaria may be triggered by physical factors such as heat, cold, friction, pressure on the skin and even by water. The weals usually occur within minutes, and last for less than one hour (except delayed pressure urticaria). Some patients suffer from more than one type of urticaria including:

Dermographism ("skin writing")
In this type, itchy weals occur after friction such as rubbing or stroking the skin. Itch may be aggravated by heat. Weals and red marks often appear as lines at the sites of scratching, and generally last for less than one hour.

Cold urticaria
Precipitated by exposure to cold, including rain, wind and cold water, and causes itching and wealing in chilled areas.

Delayed pressure urticaria
Urticaria develops where pressure has been applied to the skin, for example from tight clothes or from gripping tools.

Cholinergic urticaria
This occurs under conditions that cause sweating, such as exertion, heat, emotional stress and eating spicy food. Antihistamines usually help, and are sometimes best taken before a triggering event (e.g. exercise).

Contact urticaria
Various chemicals, foods, plants, animals, and animal products, can cause short lasting weals within minutes at the site of contact. Commoner causes are eggs, nuts (e.g. peanuts), citrus fruits, rubber (latex) and contact with cats and dogs. Although often the reactions are mild, occasionally they can be severe, for example after contact with rubber and peanuts in very sensitive individuals.

Other rare physical urticarias include Solar (induced by sunlight) and aquagenic (induced by water).
Hereditary angioedema

This is a very rare form of angioedema which tends to run in families. Patients get swelling of the face, mouth, throat, and sometimes of the gut, leading to colic. Patients do not get associated urticaria. The condition is due to an inherited deficiency of a blood protein and can be identified by a blood test. It can be treated by medicines to prevent attacks and sometimes by replacing the deficient protein in the blood in an acute attack. A severe attack of hereditary angioedema can be life threatening if left untreated; therefore patients may be advised to wear a Medic Alert bracelet to alert physicians in an emergency.

Urticarial vasculitis

A small percentage of people with urticaria develop weals that last longer than one day. These may be tender and occasionally bruise. People affected with this condition may feel unwell and have joint and stomach pains. This is because their blood vessels become inflamed (a process known as vasculitis). The diagnosis is confirmed by examining a skin biopsy from one of the weals under the microscope. The cause is rarely found, though blood tests are usually undertaken. Antihistamines are not very helpful but other medicines that help inflammation can be used.

References:
Adapted from British Association for Dermatologists patient information leaflet and from British Association of Clinical Immunology and Allergy guidelines
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