Urticaria Guideline

Background

This guideline is intended for use in A&E and general paediatric OPD to assist with the management of initial presentations of urticaria.

Definitions

- **Acute Spontaneous Urticaria** – a wheal and flare/nettle sting rash. An individual lesion lasts less than 24 hours and resolves without leaving a mark. If this a response to allergic or physical stimulation there is usually less than two hours interval between the stimulus and the rash occurring. Repeated episodes may occur when the stimulus is re-encountered. The rash may also be associated with viral infections which cause repeated spontaneous urticaria over several days or occasionally several weeks. The viral infection may be mild or in some cases subclinical.

- **Chronic Spontaneous Urticaria** – an urticarial rash occurring on most days for > 6 weeks

- **Angioedema** – swelling of the submucosa, deep reticular dermis and subcutaneous tissue. In children 50-80% of those with chronic urticaria have accompanying angioedema. Angioedema as a lone clinical problem should prompt consideration of alternative diagnoses. Is there fluid retention such as nephrotic syndrome or is there infection? Hereditary Angioedema (HAE) or a reaction to NSAIDs/ACEI should also be considered. If HAE is suspected, discussion with the responsible consultant and referral to a specialist for ongoing investigation should be carried out.

Prevalence

Acute urticaria is more prevalent, affecting 4.5 – 15% of children in the UK. Chronic urticaria is thought to affect 0.1-3% of children.
Causes of urticaria

Acute (e.g. food, latex, pollens, viral infections, pseudoallergens)

Spontaneous Urticaria Chronic (e.g. autoimmune, chronic infection, vasculitis)

Physical Urticaria
- Cold/Heat
- Pressure
- Solar
- Aquagenic
- Vibratory
- Dermographic

Exercise Induced
- Exercise/Food Dependant Exercise Induced

Cholinergic
- Increased body Temperature

Mastocytosis
- Darier’s sign – agitation of lesions produce urticaria

Chronic Urticaria

It has been found that the majority of children with chronic urticaria present with rash alone but children may also present with angioedema alone (6.6%) or wheals and angioedema (15% - Volonakis M, Katsarou-Katsari A, Stratigos J. Etiologic factors in childhood chronic urticaria. Ann Allergy 1992:69;61-5). Remission is difficult to predict but may take months to years.

Many cases of chronic urticaria remain ‘idiopathic’. Some of the most common causes of urticaria in children are viruses. Physical urticarias can be a common cause of acute intermittent urticaria. Clues to this may be, for example linear urticaria following scratching, typifying dermatographism.

Infection is felt to be a more common cause of chronic urticaria in children than in adults. Chronic sinus or dental infection as well as recurrent URTI or staphylococcal or streptococcal infections have been implicated. H. pylori infections have been both implicated and refuted as a cause of chronic urticaria but can be considered.
Approximately 30-45% of children with CU would have a positive autologous serum skin test result if performed, according to one study (Brunetti L, Francavilla R, Miniello VL et al. High prevalence of autoimmune urticaria in children with chronic urticaria. J Allergy Clin Immunol 2004:114:922-7.). This is a research tool rather than a clinical test but demonstrates presence of an autoreactive antibody to part of the high affinity IgE receptor present on mast cells and basophils. Treatment is conservative and remission is usually achieved but may take years.

4% of children with CU have positive antithyroid antibodies but are most are euthyroid, requiring surveillance only.


Chronic urticaria as part of another systemic disease such as vasculitides (urticarial vasculitis) or autoimmune disease should be considered if aspects of the history or previous tests are atypical. E.g:

- Individual lesions persist > 24 hours
- Lesions leave bruising/staining after resolution
- Fever, pain or other constitutional symptoms are associated
- Elevated ESR/abnormal urinalysis
- Raised ANA

Depending on the presenting symptoms these children should be referred on to dermatology/rheumatology as appropriate.
MANAGEMENT OF ACUTE URTICARIA

Acute Onset Urticaria
Associated with difficulty breathing or collapse

Acute Urticaria
No respiratory or cardiovascular symptoms

Urticaria most days
> 6 weeks
See Chronic Urticaria

Treat for ANAPHYLAXIS
See Protocol

History consistent with allergic reaction
Refer Allergy OPD for SPT

History NOT consistent with allergic reaction
Intercurrent Infection

Regular non drowsy H1 receptor antagonist + GP follow up

Atypical Features
Residual bruising/fever/joint pain

Yes
Antihistamine
CETIRIZINE

1-2 years  0.25mg/kg BD
2-6 years  2.5mg BD
6-12 years 5mg BD
12-18 years 10mg OD
Dose may need to be doubled to achieve control

No

Yes
Urinalysis, BP, Senior Review

No
Review Hx for physical causes, regular H1RA, GP

No

Yes

No

Yes

No
Angioedema alone

- Consider: Fluid retention eg nephrotic syndrome; Infection; any link to allergic trigger. Consider HAE

- If suspect allergy/HAE refer to allergy clinic. D/W consultant if any urgent concerns

Chronic urticaria+/− angioedema > 6 weeks duration

- Systemic features e.g. joint pain/fever/weight loss/lesions lasting >24hr

- FBC+film, U&E, ESR, autoantibodies, TFT, antithyroid antibodies, coeliac screen, autoimmune screen

- Specialist referral as required – D/W Consultant

Immediate allergic symptoms < 2hrs after contact. Reproducible. Check for association with NSAIDS

- No systemic features

- Mild infrequent urticaria

- Non drowsy H1 receptor antagonist, dose may need to be doubled.

- Routine f/u and reassess. Improvement?

- Yes – GP follow up

- No – Reassess from top of algorithm

- Frequent and severe urticaria

- Regular non drowsy AH, may need double dose +/- old H1 AH in the evening. TFT, thyroid autoantibodies, Coeliac screen

- Refer to Allergy clinic

HISTORY

- Timing
- Duration
- Shape, size, distribution
- Angioedema
- Associations eg exercise/temperature
- Systemic symptoms
- History of infections
- Atopic history
- Use of medication and response
- Drug history
- Family history