Pruritus (Itching)

Definition / Supporting Information

Pruritus, or itch, is the subjective perception of a cutaneous disturbance that is relieved by scratching or rubbing. It is usually not brought to healthcare professionals' attention unless it is generalised, chronic, or associated with an eruption.

Keywords / also known as: allergy, itch, scratching

Essential History

Ask about:

- Onset, timing, and duration of itch
  - For example, nocturnal itch can suggest scabies.
- Location of itch
  - Localised or generalised
  - Exposed or non-exposed areas
  - Lesions on the webspace of digits and linear lesions (burrows) can suggest scabies
- Skin lesions:
  - Vesicles
    - Chickenpox
  - Individual pruritic papules with central punctum
    - Infestations
  - Sharp borders that conform to a shape
    - Contact dermatitis
- Relieving factors
  - Itch that is relieved with emollients or topical antipruritic is rarely associated with a serious cause.
- Drug history (to exclude medications that can cause itching)
  - Examples include antibiotics, anti-epileptics, calcium channel antagonists and opiates
- Itching in other people who have been contacts
  - May indicate scabies
- Personal and family history of allergy, asthma, or eczema
- Chronic eczematous dermatitis over:
  - Extensor surfaces in infancy
  - Flexural areas in childhood
- Exposure to a drug or other ingestant (see Drug Overdose and Poisoning)

- Emotional stress and mental health history
  - May indicate a psychogenic cause
- Fever / arthralgias (see Joint Pain)
- Pets

'Red Flag' Symptoms and Signs

Ask about:

- Associated symptoms (rash, fever, weight loss)
  - Systemic disease
- Pruritus with uncommon disease (eg, psoriasis, bullae)
- Chronic pruritus without cutaneous disease
  - To evaluate for systemic cause
- Pruritus uncontrolled by usual topical steroids and antihistamines

Look for:

- Intensely pruritic, erythematous, and oedematous plaques and papules (wheals, hives)
  - Acute urticaria
  - Anaphylaxis
- Jaundice
- Enlargement of liver and / or spleen (see Hepatomegaly / Splenomegaly)
- Lymphadenopathy

Differential Diagnosis / Conditions

- In children, generalised pruritus is more commonly associated with cutaneous disease than with systemic disease.
  - Infestation
    - Scabies
    - Pediculosis
    - Insect bites
    - Consider neglect if a child has severe and persistent infestations, such as scabies or head lice (see When to suspect child maltreatment [NICE clinical guideline CG89]).
  - Atopic dermatitis
  - Heat rash
  - Contact dermatitis
  - Acute or chronic urticaria
- Children may itch with cutaneous diseases, such as:
  - Psoriasis

  - Lichen planus
  - Linear IgA bullous disease of childhood
- Systemic causes of itch in the child who has pruritus but no skin lesions are:
  - Stress
  - Hyperthyroidism and hypothyroidism
  - Leukaemia or lymphoma
  - Chronic kidney disease
  - Obstructive biliary disease
  - Xerosis (generalised dry skin)

Investigations

To be undertaken by non-specialist practitioners (eg, General Practitioner (GP) Team):

- For the child who has pruritus with no primary skin disorder, assess for possible systemic causes.
  - Full blood count with differential and film
  - Urinalysis
  - Urea and electrolytes, creatinine, and liver function tests
  - Thyroid function tests (thyroid stimulating hormone and free T4)

To be undertaken by specialist practitioners (eg, Emergency Department / Paediatric / Paediatric Dermatology Team(s)):

- Consider chest radiography for the child with pruritus and no primary skin disorder.
- Skin biopsy, in rare instances of undiagnosed but persistent lesions

Treatment Approach

To be undertaken by non-specialist practitioners (eg, GP Team):

- To control itching, the following steps may be helpful:
  - Keep fingernails short to prevent damage from scratching.
  - Mittens in young children
  - Keep the child fully clothed except when applying medications.
  - Apply bland emollient creams frequently, especially after bathing.
    - Over-washing may dry out the skin and worsen itch, especially if occlusive cream is not used to seal water in the skin.
    - Home humidifiers may increase relative humidity and lessen dry skin itch.
  - Apply cool compresses to relieve intense pruritus and to remove crusts and debris.
  - Apply topical steroids for short periods (generally < 2 weeks) to control inflammation.

  - Increase the dose of antihistamine until the scratching stops or drowsiness occurs.
    - Then reduce the dose to a level that controls scratching but does not cause drowsiness.
  - See the patient frequently to provide support.
  - If the child is old enough to understand, explain why these methods are being used.
- Alleviating stress frequently leads to an amelioration of symptoms.

Specific Treatment

- Infestation
  - Long clothes
  - Insect repellents
  - All family contacts should be treated at the same time if scabies is diagnosed.
- Atopic dermatitis
  - Hydration and emollients are the mainstay of therapy.
  - Mid-potency (eg, clobetasone butyrate 0.05% cream or ointment) and low-potency (eg, hydrocortisone 1% cream or ointment) topical steroids for inflammation
  - Antibiotics for secondary infection
  - Cool compresses to bring the scratch–itch cycle under control
  - Topical immunomodulators (tacrolimus and pimecrolimus)
    - Short courses (< 8 weeks) may be helpful in relieving atopic itch on facial skin and thin areas, such as the axillae
    - These medications should not be prescribed for long-term therapy.
  - Antihistamines
    - Do not routinely use oral antihistamine in the management of atopic eczema in children.
    - Offer a 1-month trial of a non-sedating antihistamine (eg, loratadine, cetirizine hydrochloride) to children with severe atopic eczema or with mild to moderate atopic eczema where there is severe itching or urticaria. If successful, treatment can then be continued while symptoms persist. Review every 3 months.
    - Offer a 7-14 day trial of an age-appropriate sedating antihistamine to children aged 6 months or over during acute flares if sleep disturbance has a significant impact on the child or parents or carers. This can be repeated during subsequent flares if successful.
- Sedating antihistamines should be given approximately 1 hour before bedtime
- Hydroxyzine hydrochloride and alimemazine tartrate are effective agents.
- Data about the use of non-sedating antihistamines for controlling itch are not consistent.

- Heat rash
  - Controlled by simple measures, such as:
    - Dusting powders
    - Avoidance of tight clothing
    - Reduced exposure to high ambient temperatures
- Contact dermatitis
  - For use of antihistamines, topical steroids, and compresses, see Atopic dermatitis

To be undertaken by specialist practitioners (eg, Paediatric / Paediatric Dermatology Team(s)):

- Ultraviolet B light therapy
  - May be helpful for generalised pruritus, such as occurs in:
    - Biliary cirrhosis
    - Severe chronic atopic dermatitis
- Topical phenol (as in calamine with zinc oxide lotion), crotamiton OR doxepin 5% (for children > 12 years)
  - May be indicated for localised use in some cases
  - Potential for contact irritation and systemic absorption limits prolonged or widespread use

When to Refer

Refer to specialist practitioners (eg, Paediatric / Paediatric Dermatology Team(s)) if:

- Pruritus with uncommon disease (eg, psoriasis, bullae)
- Chronic pruritus without cutaneous disease
  - To evaluate for systemic cause
- Pruritus uncontrolled by usual topical steroids and antihistamines

‘Safety Netting’ Advice

- Advise patient / parents / carers to seek medical advice if itching or skin lesions worsen or do not improve, because of the risk of infection or scarring.
- Advise patient / parents / carers that scratching or rubbing can:
  - Produce extensive disfigurement
    - Linear excoriations
    - Lichenified plaques
  - Predispose the patient to cutaneous infections
  - Cause social isolation
    - The child may be viewed as being contagious or unclean.

Patient / Carer Information

Please note: whilst these resources have been developed to a high standard they may not be specific to children.

- Itching (Web page), the NHS website
- Itchy bottom (Web page), the NHS website
- Urticaria (hives) (Web page), the NHS website
- Eczema: 7 tips to stop the itch (Web page), the NHS website
- Scabies (Web page), the NHS website
- Dandruff (Web page), the NHS website
- Ringworm and other fungal infections (Web page), the NHS website

Resources

National Clinical Guidance

Atopic eczema in children: Management of atopic eczema in children from birth up to the age of 12 years (Web page), NICE clinical guideline CG57, National Institute for Health and Care Excellence.

Psoriasis: The assessment and management of psoriasis (Web page), NICE clinical guideline CG153, National Institute for Health and Care Excellence.

When to suspect child maltreatment (Web page), NICE clinical guideline CG89, National Institute for Health and Care Excellence.

Medical Decision Support

Neglect (Web page), RCPCH Child Protection Companion 2013 (2nd Edition)

Suggested Resources

Please note: these resources include links to external websites. These resources may not have national accreditation and therefore PCO UK cannot guarantee the accuracy of the content.

Itch – widespread (Web page), NICE clinical knowledge summary, National Institute for Health and Care Excellence.

Eczema – atopic (Web page), NICE clinical knowledge summary, National Institute for Health and Care Excellence.

Itchy Wheezy Sneezy (Website).

Rash (Web page – requires log-in), Spotting the Sick Child.

Grattan CEH, Humphreys F, British Association of Dermatologists Therapy Guidelines and Audit Subcommittee. Guidelines for evaluation and management of urticarial in adults and children. Br J Dermatol. 2007;157(6):1116-1123. [PubMed]

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