Sweating - Excessive (Hyperhidrosis)

Definition / Supporting Information

Hyperhidrosis is excessive sweating (perspiration). This may be generalised, or localised:

- Palmar
- Plantar
  - Bromhidrosis - malodorous hyperhidrosis of the soles of the feet
- Axillary

Essential History

- Generalised sweating in association with feeding difficulties in infancy may point to congestive cardiac failure.
- Examination should only proceed when the ABCs (airway, breathing, circulation) have been addressed.

Ask about:

- Odour
- Interference with daily life
  - Fingers too slippery to hold a pen
  - Sweaty feet causing footwear to degrade quickly
- Medications, examples of which include:
  - Carbamazepine
  - Amlodipine
  - Nifedipine
  - Lisinopril
  - Ramipril
  - Levothyroxine sodium
  - Omeprazole
  - Tacrolimus
- Growth

‘Red Flag’ Symptoms and Signs

Ask about:

- Maternal drug withdrawal
- Infant feeding difficulties
  - Consider congestive cardiac failure

- Symptoms suggestive of systemic disease
  - Lethargy
  - Fatigue
  - Deterioration in academic performance
  - Weight loss
  - Loss of appetite
  - Headache
  - Fever

Look for:

- Evidence of congestive cardiac failure
  - Tachycardia
  - Gallop rhythm
  - Hepatomegaly
- Hypertension
  - Phaeochromocytoma
- Lymphadenopathy
  - Lymphoma
- Secondary sexual characteristics
  - Consider precocious puberty (depending on age)

Differential Diagnosis / Conditions

- Infancy
  - Maternal drug withdrawal
  - Congestive cardiac failure
  - Overheating
  - Sepsis
- Child / adolescent
  - Hypoglycaemia
  - Hyperthyroidism
  - Phaeochromocytoma
  - Cardiac failure
  - Lymphoma
  - Riley–Day familial dysautonomia
    - Hyperhidrosis
    - Skin blotching
    - Episodic hypertension alternating with hypotension
    - Cyclical vomiting
  - Sepsis
  - Recreational drugs

- Drug withdrawal

Investigations

- There are no specific investigations for localised hyperhidrosis.
- For generalised hyperhidrosis:
  - If there are concerns about infant feeding difficulties evaluation should only proceed when the ABCs have been addressed.

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

- If there is suspected infection:
  - Blood cultures
  - Inflammatory markers
  - Serum glucose
  - Urine dipstick / culture and sensitivity
    - See Urinary tract infection in children: diagnosis, treatment and long-term management [NICE clinical guideline CG54]

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

- As indicated:
  - Chest x-ray
    - If feeding difficulties
    - Investigations for suspected congestive cardiac failure should be discussed with the Paediatric Cardiology Team
  - Drug toxicology
  - Thyroid function tests
  - Investigations for suspected phaeochromocytoma should be discussed with the Nephrology Team
  - Investigations for suspected lymphoma should be discussed with the Paediatric Oncology Team

Treatment Approach

To be undertaken by non-specialist practitioners (eg, GP Team), or specialist practitioners (eg, Paediatric / Paediatric Dermatology Team(s)) for older children and adolescents:

- For bromhidrosis:
  - Advise frequent cleansing with drying deodorant soaps
  - Advise going barefoot whenever possible
  - Topical antibiotics

- For combined axillary hyperhidrosis and bromhidrosis:
  - Frequent clothing changes
  - Topical antibiotics and deodorant powders
- For sweating caused by emotional stress
  - Propranolol hydrochloride and anxiolytics
- Topical and systemic agents
  - 20% aluminum chloride hexahydrate
    - See Hyperhidrosis [NICE clinical knowledge summary; supporting evidence – topical aluminium salts]
  - Anticholinergic agents
- Management of primary palmoplantar and axillary hyperhidrosis may decrease the risk of:
  - Warts
  - Dermatophytosis
  - Pitted keratolysis
  - Eczematous dermatitis

To be undertaken by a specialist Paediatric Dermatology Team:

- See Hyperhidrosis [NICE clinical knowledge summary; supporting evidence: secondary care treatments]
- Iontophoresis
- Botulinum toxin type A
  - For axillary sweat gland chemodenervation
  - Palmar and plantar hyperhidrosis
    - Effective for up to 12 months
    - Has been used in patients as young as 14 years
    - Temporarily, or rarely, causes permanent muscle and nerve injury from the injections
- In extreme cases:
  - Excision of local axillary skin
  - Removal of glands by curettage or liposuction
    - Ganglion sympathectomy cannot be recommended for most patients who have axillary hyperhidrosis, because of attendant complications.

When to Refer

Refer urgently to specialist practitioners (eg, Emergency Department / Paediatric Team(s)) if:

- Any red flag signs or symptoms
- Symptoms or signs of congestive cardiac failure
  - Arrange emergency transfer

Refer / escalate care to relevant specialist team / Paediatric Dermatology Team if:

- There are signs or symptoms of generalised sweating suggestive of:
  - Cardiac dysfunction
  - Endocrine dysfunction or malignancy
- Hyperhidrosis interferes with appropriate bodily function
- Hyperhidrosis is socially isolating, as a result of odour or excessive drenching of clothing

'Safety Netting' Advice

- Advise families to seek medical advice if any 'red flag' signs or symptoms develop.

Patient / Carer Information

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

- Hyperhidrosis (Web page), the NHS website

Resources

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.

Hyperhidrosis (Web page), NICE clinical knowledge summary, National Institute for Health and Care Excellence

Jacobs AA, Desai A, Markus R. Don't sweat hyperhidrosis: a review of current treatment. Cosmetic Dermatol 2005;18:725–731

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