Pruritus

KEY POINTS

- Pruritus can be described as an unpleasant skin sensation which produces the desire to scratch
- Pruritus is relatively uncommon in advanced disease, but can be very unpleasant and difficult to treat
- A combination of systemic and topical treatments often provides the best relief
- Non-pharmacologic treatments can be very helpful
- **Mild to moderate pruritis** which occurs occasionally is normal, but **severe pruritus** is usually associated with advanced illness, most commonly uraemia (chronic renal failure), cholestasis, opioids, and haematologic disorders
- Pruritus may also occur in solid tumours via biliary obstruction (i.e. pancreatic cancer)
- Dry skin is also common is patients with severe advanced disease and further contributes to pruritis
- Opioid-induced itch is due to the release of histamines and may require switching opioids

- Opioids can cause generalized itching and is more common in children than adults

ASSESSMENT

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- History should include the times at which the itching occurs (whether continuous and whether at night or day), its quality (burning, itching, etc), location, and relevant medication history
- Inquire about whether other members of the household are also itching, which may suggest scabies

- Schistosomiasis may cause intermittent itchy wheals or urticaria
- Examination should include a review of the dryness of the skin, possible presence of scabies (itchy bumps on the genitals, finger webs, and other areas), and possible presence of jaundice
- Review medications which may induce photosensitivity and exacerbate itching, including NSAIDs, diuretics, antineoplastics, and ciprofloxacin

MANAGEMENT

GENERAL MEASURES

- Pruritus is often caused by dry skin, so a good first measure is a simple moisturizer cream
- Keep the patient cool and avoid extra blankets or warm clothing, encourage the patient to wear loose cotton clothing
- Showers or baths should be cool and avoid using strong soap, follow with gentle drying and application of moisturizing cream
- Adding baking soda (sodium bicarbonate) to bathwater can help form a protective layer and maintain skin hydration
- Keep fingernails short to avoid skin trauma from scratching, wear cotton gloves if scratching occurs while sleeping
- Avoid alcohol and spicy foods which cause the skin to become warmer and dried out, leading to more itching
- Apply cool packs or wet water dressings (e.g. clothing soaked in water), which provide temporary relief and speed up healing

TOPICAL AGENTS

- Petroleum jelly (Vaseline) is considered the most effective lubricant for dry skin
- **Menthol (0.5-2%) and/or camphor (0.5-3%)** compounded into a bland emollient base such as Vaseline, can be used several times a day as needed. These agents produce a mild anaesthetic action in the skin, but use with caution as cutaneous reaction can occur
- **Creams containing pramoxine and calamine** are also effective

against itching

- **Mild to moderate potency topical corticosteroids** can reduce inflammation
- **Ketamine (0.5-5%) with amitriptyline (1-2%) in a compounded cream**
- **Lidocaine cream (2.5%)** will anaesthetize sensory nerve endings; however, potential toxicity from systemic absorption can occur if used over large areas
- Ultraviolet B light therapy, 3 times per week can be useful for cholestasis, uraemia, and malignant skin infiltrations

SYSTEMIC AGENTS

- Can be used if other treatments tailored to the specific cause are ineffective
  - **Mirtazepine 7.5-15 mg PO nightly, increase by 15 mg after 1 week, up to a maximum of 30 mg/day**
  - May cause drowsiness, but this can be beneficial for patients with itching
  - May cause QTc prolongation. Consider risk versus benefits of this option
  - Do not discontinue abruptly as discontinuation symptoms can occur
  - May cause QTc prolongation. Consider risk vs. benefits of this option
- **Gabapentin 100 mg PO TID, titrate every 3-7 days, maximum dose of 3600 mg/day**
  - Works by blocking central nociceptive signals to brain

CAUSE SPECIFIC THERAPY

Cholestasis

- Use general measures above
- Antihistamines (H1 and H2 receptor antagonists) are generally ineffective. They can be reserved for use in post-operative pruritis (e.g. if spinal anaesthesia was used)

- Consider surgical referral for placement of biliary stent (if available and depending on patient's general condition)

The burden of investigation and treatment should always be weighed against the prognosis, the likely benefit of treatment, and the patient's wishes

- **Cholestyramine 4 g PO 1-6 times/day to a maximum of 36 g/day**
  - Note that cholestyramine will be ineffective in complete biliary obstruction because it works by binding bile salts to promote their excretion
- Additional medications to consider:
  - **Naltrexone 6-12.5 mg Subcutaneous daily, increase by 12-25 mg BID, maximum of 300 mg/day**
  - **Sertraline 25 PO once daily, adjust by 25 mg every 4-5 days, maximum of 100 mg/day**
  - **Rifampicin 75 mg once daily, titrate by doubling the dose every week, maximum 300 mg,** has many drug interactions and can contribute to hepatic dysfunction

Uraemia

- Use general measures as above
- Antihistamines (H1 and H2 receptor antagonists) are generally ineffective
- **Capsaicin 0.025% or 0.075% cream applied 3-5 times daily** is useful where there is localized pruritus. Do not apply to large areas of the body
- Correct hyperphosphataemia
- **Sertraline 25 mg PO once daily, increase by 25 mg every 4-5 days, maximum of 100 mg/day or paroxetine starting dose of 20 mg Once daily, increase by 10 mg weekly to max of 50 mg.** Doses of 20 mg have been reported to be effective for this indication
- **Mirtazepine 7.5-15 mg PO qHS**
- **Gabapentin 100 mg PO once daily**, increase dose with caution due

to impairment in renal function

Hodgkin's Lymphoma

- Use general measures as above
- Antihistamines (H1 and H2 receptor antagonists) are generally ineffective
- Palliative chemotherapy to reduce symptoms

Consider if the patient is well enough to benefit

- Corticosteroids, e.g. **dexamethasone 4-8 mg PO daily or prednisolone 10-20 mg PO TID**
- If ineffective, substitute: **cimetidine 400 mg PO BID or famotidine 20 mg PO BID**

Opioid Induced

- Use general measures as above
- Commonly transitory, lasting only a few days
- Opioid rotation (if possible) or addition of an opioid antagonist at a low dose (e.g. **naloxone**).

- **Naloxone 0.25-2 mcg/kg/hr IV as continuous infusion** is particularly effective in children with sickle cell disease who are often very itchy due to the high doses of opioids required for severe pain
- Doses up to 3 mcg/kg/hr can be used, but the risk of loss of pain control increases with doses greater than 3 mcg/kg/hr and may require increased opioid doses
- Ondansetron can also be considered
- **Ondansetron 0.1-0.15 mg/kg/dose PO/IV q8-12h PRN (Maximum: 8 mg/dose, maximum 3 doses in 24-hour period)**

- Potential side effects of antihistamines may be agitation or confusion

PITFALLS/CONCERNS

- Itching associated with cholestasis often starts on palms and soles and the severity is unrelated to the level of bile acids in the skin
- H1 receptor blockers are ONLY useful in histamine-based itch, such as a drug reaction or urticaria, and rarely help in itching associated with advanced disease in palliative care
- Ondansetron is helpful ONLY when opioids cause itching
- Calamine cream may cause drying of the skin and worsening of the itching

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