27- Urticaria

Background:
- Commonly known as “hives”
- Affects 10-20% of population
- Presentation at any age
  - Chronic Urticaria: ~20-50 y/o
- Classified into acute, acute intermittent, chronic forms

Acute Urticaria

Background:
- Lasting < 6 weeks
  - Does not necessarily occur on a daily basis
- Triggers:
  - Bugs: insect stings and infections; URIs are most common infectious cause, causing 40% of acute urticarias (compared to only 5% of chronic urticarias); UTIs and GI disease can also be a cause
  - Drugs: most common are ACE I’s, NSAIDs, opioids
    - Others: alcohol, vancomycin, polymyxin B, radiocontrast media
  - Physical triggers: dermatographism, cold urticaria, delayed pressure, cholinergic, adrenergic, heat, solar, aquagenic, vibrational

PEARL: Physical causes of urticaria can present acutely, however we tend to think of them as chronic inducible urticarias!

PEARL: How can cold urticaria be dangerous? Pts should be counseled against swimming in cold bodies of water, since it can cause massive histamine release → hypotension, syncope, and drowning
  - Food: WEMPS mnemonic (wheat, eggs, milk, peanuts, and soy)

Clinical Presentation:
- Recurrent papular swellings
- Can be associated with angioedema typically affecting lips and periorbital areas.

Histology:
- Limited epidermal change
- Superficial dermal edema
- Perivascular and interstitial mixed infiltrate with neutrophils
- Vascular damage = urticarial vasculitis

Diagnosis:
- H&P:
  - ROS to assess for angioedema, anaphylaxis, triggers (bug, drug, physical, food)
    - Other: fever, chills, fatigue, rhinorrhea, sore throat, cough, ab pain, N/V/D, dysuria, etc
  - Key question = duration of lesion

- Spontaneous: < 24 hrs
- Inducible: a few hours
- Urticarial vasculitis: >24 hours

- Physical Exam:
  - Asses for dermatographism, note size/shape of lesions, coexisting lesions (purpura = think urticarial vasculitis), lymph nodes (infectious vs malignancy)
  - Other options: allergy testing, CBC, ESR, ANA, TSH, free T4, anti-thyroglobulin, possibly stool ova and parasites

PEARL: What are some H&P findings that would make you consider urticarial vasculitis? 1) hives lasting >24 hrs 2) painful/pruritic 3) purpura 4) systemic sx

Treatment
- Address triggers
  - 2nd generation non-sedating antihistamines (Loratadine, Desloratadine, Fexofenadine, Cetirizine, Levocetirizine)
- If minimal improvement, then consider: Increasing dose, Adding another 2nd gen anti-histamine, H2 receptor antagonists, leukotriene antagonist, or 1st gen anti-histamine
- Other/severe cases: systemic corticosteroids, UV tx, doxepin, cyclosporine, or Omalizumab

Contact Urticaria

Background:
- Immunologic or non-immunologic
- Immunologic: type 1 hypersensitivity rxn caused by skin contact with latex, meats, potatoes, etc.
- Non-immunologic: triggered by jellyfish stings or stinging nettles
Chronic Urticaria

Background:
- Lasting ≥ 6 weeks
  - Nearly daily or daily episodes
- Can be divided into inducible and spontaneous forms
- Remember 30% rule:
  - 30% associated with autoantibodies to mast cells’ IgE receptor or IgE itself
  - 30% of pt have thyroid auto-ab
  - 30% exacerbated by aspirin
  - 30% resolve in 5 yrs

PEARL: Thyroid dz is NOT the only associated auto-immune condition. Chronic urticaria can be associated w/ Type I DM, Lupus, RA!

PEARL: Strong Association w/ psych: 50% of pts display anxiety, depression, or somatoform dz

Clinical Presentation:
- Chronic Inducible Urticarias
  - Dermatographism- ‘skin writing’; wheal that forms within minutes of stroking or scratching skin
  - Cold urticaria- presents during rewarming phase after cold air/water exposure
  - Delayed pressure- may be delayed 12 hrs from pressure exposure (e.g. tight waistband)
  - Cholinergic- sweating and exercise increase core body temp
  - Adrenergic: blanched vasoconstricted halo occurs after stress-induced release of adrenaline
  - Heat: w/in minutes of contact w/ heat
  - Solar: w/in minutes of exposure to all types of light, including visible, UVA, UVB
  - Aquagenic: contact w/ water of ANY temp
  - Vibrational: triggered by things like lawnmowers, motorcycles, jackhammer, etc.

Histology:
- Limited epidermal change
- Superficial dermal edema
- Perivascular and interstitial mixed infiltrate with neutrophils
- Mast Cells
- Vascular damage = urticarial vasculitis

Diagnosis:
- See acute urticaria

Treatment:
- See acute urticaria
- Omalizumab (Xolair)