The Agony of the Chronic Itch: A Case Study of Chronic Urticaria Dermographism

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Disclosures

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Learning Objectives:
- The learner will be able to identify the clinical manifestations of chronic urticaria dermographism.
- The learner will be able to develop management strategies for treating this condition.
Urticaria

- Skin condition with varying characteristics
- Also known as hives
- Termed chronic after at least 6 weeks duration
- Lesions may last minutes to hours
- It is a pattern of reaction, rather than a disease
Dermographism

- A type of urticaria that develops due to scratching, pressure or friction
- Wheals usually resolve within an hour
- Few articles in the medical or nursing literature
- No one theory explains this phenomena
- Control of symptoms is the goal of treatment
Pathophysiology

- Variety of theories including autoimmune & faulty cellular
- Basophils, like mast cells, are produced in the bone marrow
- Basophils produce & store: histamine, platelet activating factor, chemokines & cytokines
- Faulty cellular activates dermal mast cells & basophils
- Autoimmune theory comes from a dysfunctional thyroid
Evaluation

- Thorough history & physical exam
- Ask about onset, timing, triggers, associated sx
- Current meds; Have there been any changes?
- Any recent travel, recent illness, weight loss, fever?
- Look for current lesions and test for dermographism
- Examine for any systemic illness
Diagnostics

- Laboratory studies to include: CBC with diff, CMP, TSH, Thyroid Peroxidase (TPO) Ab, Thyroglobulin Antibody, Histamine Release, Free T3, T4.
- Differential Diagnoses to consider: insect bites, atopic dermatitis, contact dermatitis, erythema multiforme, drug reactions, viral exanthema, urticarial pigmentosa and others
Management

- Goal is symptomatic relief
- Main symptom is itching
- A trial of different drug combinations is used until the right “fit” is found
- The 2014 update to treatment is found in the *Journal of Allergy & Clinical Immunology, 133*(5), p. 1270-1277
- Periodic lab work is done to monitor drug effectiveness and pts response to treatment
Case Study

- 55 year old female with unknown, sudden onset of hives that itch
- Breakouts are periodic on various parts of body on a daily basis with itching
- Episodes do not last long but are uncomfortable
- No family hx of skin reaction or skin cancer
- Personal hx: hypothyroidism, hypertension, hyperlipidemia & osteoarthritis
Patient History

- Pt had been on allergy injections
- Allergy prevention measures taken at home
- Hx of strong reactions to poison ivy
- Current meds: metoprolol, levothyroxine, pravastatin, meloxicam, cetirizine, calcium, vitamin D3, weekly allergy injections.
Physical Exam

- Well developed, well nourished, middle aged female with freckled skin
- Vital signs wnl; exam unremarkable
- Alert, oriented, cooperative
- Red, raised X on anterior left forearm drawn with blunt instrument
- Pt states area itches
Initial Treatment

- Labs drawn for CBC, CMP, TSH, Thyroid Peroxidase Ab, Thyroglobulin Antibody, Histamine Release, Free T3 and Free T4
- Initial tx: cetirizine 10 mg po bid, prednisone 20 mg po bid
- Stop allergy injections
- Benadryl 25 mg po hs for itching and sleep
Case Study Update

- Lab results were wnl except for thyroid peroxidase & thyroglobulin antibody – both were 4 x normal limit
- After 4 weeks, symptoms were not improved
- Medication change: fexofenadine 180 mg po daily, montelukast sodium 10 mg po HS, hydroxyzine Hcl 25-50 mg po HS – stop cetirizine, benadryl and prednisone due to no change in sx; restart allergy injections
- Consult with internal medicine NP: increase levothyroxine to 50 mcg po daily
- After 4 more weeks, flare up of hives & wheals was less intense and pruritus was under control; levothyroxine was increased to 75 mcg based on TSH lab values
Conclusion

- Will monitor TSH lab values every 3 months
- Pt will record episodes of sx to include onset, triggers, symptoms and duration
- Symptomatic treatment is the most frequently used form of management
- Goal is to inhibit or suppress the release of mast cell mediators for the greatest symptomatic relief
Questions?