



A HEALTHY KANSAS STARTS HERE

# Hyperhidrosis

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# Disclosure

- Nothing relevant to disclose.

# Objective

- Review diagnostic criteria for primary hyperhidrosis.
- Outline management options for patients with primary hyperhidrosis.

# Hyperhidrosis (HH)

- **More sweat than is necessary for thermoregulation and function**
- Primary = idiopathic
- Face, scalp, palms, soles, axillae
- Found in 1-5% of population
- Onset in childhood or adolescence
  - Unique challenges

# Diagnostic Criteria

- Focal, visible, excessive sweating of at least 6 months duration without apparent cause
- Plus at least **two** of the following characteristics:
  - Bilateral and symmetric
  - Impairs daily activities
  - At least one episode per week
  - Onset before age 25
  - Family history of idiopathic hyperhidrosis
  - Focal sweating stops during sleep

# Pathogenesis of Sweating

- Eccrine glands are responsible for excessive sweating
  - Abundant in common HH locations
  - Normal size, number, and histology
- Sympathetic Nervous System
  - Acetylcholine is primary NT of eccrine glands

# Pathogenesis of HH

- Uncertain etiology
- Complex problem of autonomic nervous system leading to overstimulation
  - Global effects
- Central emotional response control



# **WHY HYPERHIDROSIS IS SERIOUS**

# Diagnosis Criteria

- Focal, **visible**, **excessive** sweating of at least six months duration without apparent cause
- Plus at least two of the following characteristics:
  - Bilateral and relatively symmetric
  - **Impairs daily activities**
  - At least one episode per week
  - Onset before age 25
  - Family history of idiopathic hyperhidrosis
  - Focal sweating stops during sleep

# Why Hyperhidrosis is Serious

- Stigma
  - Unpleasant
  - Perception that it is controllable
- Pervasive
  - No “off switch”
  - Professional and personal consequences
  - Activity modification and avoidance
- Quality of life surveys
- The child at school

# Axillary HH Treatments

## Prescription strength antiperspirant w/ metal salt

- 6.25% to 20% aluminum chloride hexahydrate
- Irritation
- Must apply to dry skin for 1-2 weeks

## Botulinum Toxin A (BTX A)

- Block release of acetylcholine from presynaptic junction
- Improved efficacy
- Painful
- Expensive

# Axillary HH Treatments

- Glycopyrrolate, oxybutynin
- Microwave thermolysis
  - 2 sessions, 3 months apart
  - Not well covered by insurance
  - Long term effectiveness
- Topical glycopyrronium 2.4%
- Iontophoresis

# Palmar (+ Plantar) HH Treatments

## Topical Antiperspirants

- Apply night before, wash hands after 6+ hours
- Allow 2 weeks

## Iontophoresis

- Possibly similar mechanism as antiperspirants
  - H<sup>+</sup> and metal ions clog ducts
- Tap water
- Added anticholinergics or aluminum chloride
- Downside

# Palmar (+ Plantar) HH Treatments

- Botulinum Toxin A
  - Off-label, but often covered
  - Good efficacy
  - **More painful**
  - **Risk of muscle weakness**
  - Expensive
- ETS—Endoscopic thoracic sympathectomy
  - Immediate relief
  - Compensatory sweating
  - Effects of severed nerve

# Palmar (+ Plantar) HH Treatments

- Systemic Anticholinergic Therapy
  - Glycopyrrolate 1-2mg BID
  - Oxybutynin 2.5mg QD
  - Off-label
  - Systemically and competitively inhibit cholinergic signaling
  - Practical, incomplete, and imperfect

# Anticholinergic side effects

- **Dry mouth, general dryness**
- Drowsiness
- Tachycardia
- Blurred vision
- Urinary retention or hesitancy
- Memory impairment
- Constipation
- Potential toxicity in elderly
- Confusion in elderly

# Generalized HH Treatments

- Topical antiperspirants
- Botulinum toxin A
- Oral medicines

# Craniofacial HH Treatments

- Topical antiperspirants
- Botulinum toxin A
- Oral medicines
- Sympathectomy

# Summary

- Consider the social effects of hyperhidrosis
- Topical therapy is always first-line
- Counseling on treatment and expectations
- **SweatHelp.org** - International Hyperhidrosis Society
  - Treatment algorithms for providers
  - Good patient information

# References

- Nawrocki, Shiri, and Jisun Cha MD. The etiology, diagnosis, and management of Hyperhidrosis: A comprehensive review. *J Am Acad Derm.* 2019;81(3):657–680. doi:10.1016/j.jaad.2018.11.066.
- Smith MD, C Christopher, and David Pariser MD. “Primary Focal Hyperhidrosis.” *UpToDate*, 12 July 2019.
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**THANK YOU**



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