Board Review Q

ED Conference 7/17/13

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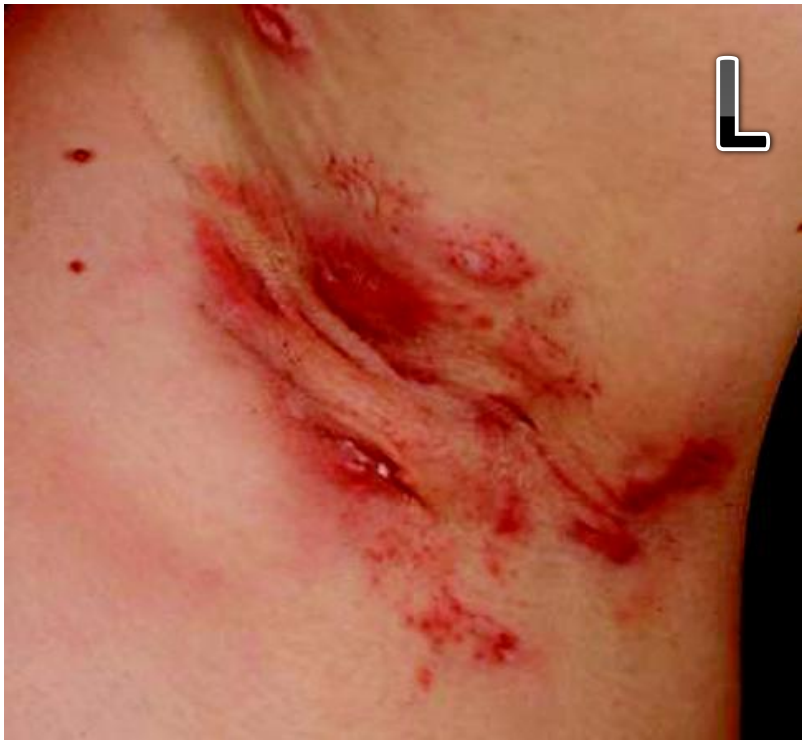
- A 14 yo F presents to the ED with multiple painful swellings in her Left axilla for the past 5 days. She describes she had initial discomfort, itching and redness in her Left axilla 2 weeks ago following which multiple swellings appeared in the area. The swellings have increased in size over past few days, her pain is becoming more severe (5/10 -> 10/10).
- ROS negative. PMH: Acne, using benzoyl peroxide topically X 4 weeks. Menarche at 9 yr, regular menstrual cycles. Denies alcohol, drug abuse & sexual intercourse. Has been smoking in school for past 3 months since a friend told her it helps lose weight.

Physical Exam:

- VS: T 37.6 C, HR 88 bpm, RR 14/min, BP 108/72, Wt: 70.4 kgs(90-95th%), Ht: 160 cm (50-75th%), BMI: 27.5 (95-97th%)
- Systemic exam:
  - HEENT: PERRLA, EOMI, B/L TMs clear, no pharyngeal erythema or exudate, no cervical LAD
  - CVS: RRR, no murmurs, gallups, or rubs
  - Lungs: CTAB
  - Abd: soft, +BSX4,NTND, no organomegaly
  - NL female external genitalia

Local exam:



- L axilla:
  - Inspection: Multiple, 1-1.5 cms, deep red, nodules with surrounding induration.
  - Palpation: warm to touch, ++tender nodules
- R axilla: NL exam.
- No other lesions over her body.
- No LAD.

Picture courtesy: annals.org (Annals of Internal Medicine)

What is the most likely diagnosis?

a) Furuncles
b) Carbuncles
c) Hidradenitis suppurativa
d) Severe Acne

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Hidradenitis suppurativa

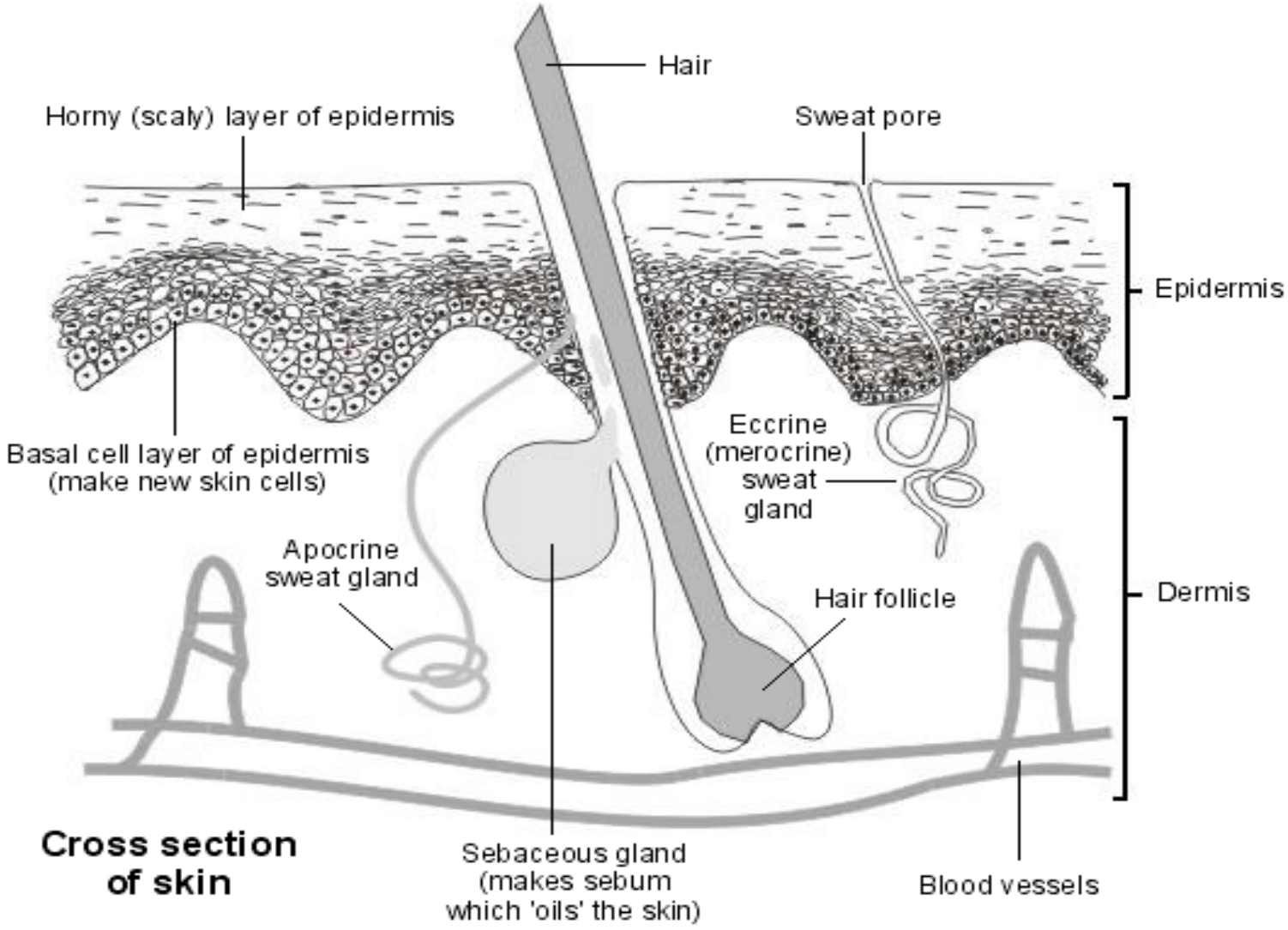
- Hidradenitis suppurativa (HS) or acne inversa is a chronic, inflammatory, recurrent, debilitating skin disease that usually presents after puberty with painful, deep-seated, inflamed lesions in the apocrine gland-bearing areas of the body, most commonly the axillaries, inguinal and anogenital regions. Tender nodules often present at puberty and might spontaneously rupture or coalesce to form deep, painful dermal abscesses; subsequent hypertrophic scarring and dermal contractures often occur.

- Typically, HS develops in the 2nd or 3rd decades. F:M =3:1, overall prevalence 0.3-4%,no racial predilection. Associated w/ obesity & smoking.

- Diagnostic criteria of hidradenitis suppurativa (adopted by the 2nd International Conference on Hidradenitis suppurativa, March 5,2009, San Francisco, CA US)

  1) typical lesions, i.e., deep-seated painful nodules: 'blind boils' in early lesions; abscesses, draining sinus, bridged scars and 'tombstone' double-ended pseudo-comedones in secondary lesions
  2) typical topography, i.e., axillae, groins, perineal and perianal region, buttocks, infra and inter mammary folds
  3) Chronicity and recurrences

  All three criteria must be met for establishing the diagnosis.



- HS is a disease of the terminal hair follicle associated with lympho-histiocytic inflammation, granulomatous reactions, sinus tracts and scarring.

- A consistent finding in histological studies of HS is a follicular occlusion due to hyperkeratosis, regardless of disease duration, leading to occlusion of the apocrine gland with subsequent follicular rupture, inflammation and possible secondary infection.

- Furuncles & Carbuncles:

  Furuncles and carbuncles occur as a follicular infection progresses deeper and extends out from the follicle. Commonly known as an abscess or boil, a furuncle is a tender, erythematous, firm or fluctuant mass of walled-off purulent material, arising from the hair follicle. May occur anywhere on the body, but a predilection for areas exposed to friction. Rarely appear before puberty. Usual pathogen is S. aureus. Typically, develops into a fluctuant mass and eventually open to the skin surface, allowing the purulent contents to drain, either spontaneously or following incision of the furuncle.

- Carbuncles are an aggregate of infected hair follicles that form broad, swollen, erythematous, deep, and painful masses that usually open and drain through multiple tracts. Constitutional symptoms, including fever and malaise, are commonly associated with these lesions but are rarely found with furuncles.

- Acne:

  Acne vulgaris is characterized by noninflammatory, open or closed comedones and by inflammatory papules, pustules, and nodules. It typically affects the areas of skin with the densest population of sebaceous follicles; these areas include the face, the upper part of the chest, and the back. Local symptoms may include pain or tenderness. Systemic symptoms are most often absent.

Severe acne with associated systemic signs and symptoms such as fever is referred to as acne fulminans.

Severe acne, characterized by multiple comedones, without the presence of systemic symptoms, is known as acne conglobata. This severe form of acne frequently heals with disfiguring scars.

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b) Topical clindamycin
c) PO Doxycycline
d) Surgery with wide excision

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Management of HS is based on the stage of the disease. Hurley Clinical staging is frequently used to describe severity. There are 3 stages:

Stage I: Abscess formation, single or multiple, without sinus tracts or cicatrization (scarring).

Stage II: Recurrent abscesses with tract formation and cicatrization, single or multiple widely separated lesions.

Stage III: Diffuse or near diffuse involvement, or multiple interconnected sinus tracts and abscesses across the entire area.

What stage does our patient have?

STAGE I

General Measures in managing HS:

- Avoid skin trauma
- Hygiene
- Smoking cessation
- Weight management
- Diet
- Educate & support

Stage	Management
Stage I	• Topical 1% Clindamycin X 3 months • Intralesional Corticosteroids (1/month X 3) • Acute Flares: Systemic antibiotics X 7-10 days PO Doxycycline or Minocycline (50-100 mg BID). Alternatives: PO Clindamycin (300 mg BID) & PO Amox/Clav (500 mg – 1gm TID).
Stage II	• Systemic antibiotics X 2-3 months. Typically, Doxycycline or Minocycline (dose as above). Alternatives: Clindamycin + Rifampin (300mg + 600 mg BID) X >/ =10 weeks. • Hormonal Therapy: Antiandrogens: Cyproterone acetate(CPA) with estrogen, Finasteride or OCPs w/ ethinyl estradiol & norgestrel. • Surgical unroofing of nodules & sinuses
Stage III	• Extensive surgical excision with wide margins to remove nidus of inflammation & eliminate interconnected sinus tracts and scarred tissue. • Medical therapy: ➢ TNF Alpha inhibitors: Infliximab, adalimumab, etanercept ➢ Oral Retinoids: acitretin, Isotretinoin

References:

- Medscape
- UptoDate
- Hidradenitis Suppurativa Foundation (HSF). www.hs-foundation.org