HIDRADENITIS
SUPPURATIVA: SURGICAL
TREATMENT OPTIONS
Paul G. Hazen, MD, FAAD
Clinical Professor of Dermatology
Case-Western University School
Of Medicine

Potential Conflicts of Interest:
• Advisor and Speaker for Abbvie

Boils Seen in Art and History:
Plague vs HS

Diagnosis of Hidradenitis
Suppurativa
• 1-4% of the population
• Defined by clinical features
• Recurrent, sterile boils or
abscesses Usually in crease areas:
Women in anterior creases; men in
posterior creases
• With recurring inflammation, development
of scars and sinus tracts
• Common to compress one area, and drain
pus from a distant site

Presumed Pathogenesis of HS:
• There is a presumed weakness of the
follicular epithelium, close to the junction
of the sebaceous gland and the follicle.
• Follicular rupture causes dermal inflam,
seeding of epithelial stem cells.
• Results in abscesses/nodules, scars, &
sinus tracts

Hidradenitis: Histology
HS: Associated conditions

- Follicular tetrad: Hidradenitis suppurativa, Acne, Folliculitis decalvans, pilonidal sinus
- Women 3:1 more frequent than men
- May be aggravated by androgen excess, smoking, obesity, heredity, meds, ?diet
- Polycomedonal follicles
- Inflammatory bowel disease, Arthritis
- Sweet's syndrome, pyoderma gangrenosum, ? Vascular disease

Folliculitis Decalvans: 6%

Pilonidal Sinus: 36 %

Polycomedonal Follicle

Clinical Grading of HS:

- Hurley Grade I: Solitary inflammatory nodule/abscess
Clinical Grading of HS:

- Hurley Grade I: Solitary inflammatory nodule/abscess
- Hurley Grade II: Multiple inflammatory nodules, with minimal scarring and sinus tracts
- Hurley Grade III: Multiple nodules, scars, sinus tracts

Hurley Grade I With Solitary Nodule

Sinus Tracts in HS Nodule

Hurley Grade II

Hurley Grade III: Multiple nodules, scars, sinus tracts
Sinus Tracts in Stage III HS

Punctate Follicular Variant

Surgical Treatments for HS:
- I&D
- Cryosurgery, cryo-canulation
- Destructive: Electrosurgical, Laser/Nd-YAG.
- Excision – with or without repair
- Unroofing
- CO2 laser excision and marsupialization

INCISION & DRAINAGE:
- Goal: To relieve acute pain, inflammation.
- Common first treatment for many patients thought to have “boils”.
- Releases pressure, but recurrences are common. Nearly 100%.
- May cause additional sinus tracts.
- Alternative Tx is intralosomal steroid, ATB.

HS-SURGICAL THERAPIES-
CRYOSURGERY:
- Can be local destruction, or through infusion into sinus tracts.
- Best for smaller lesions.
- Difficult to control, higher recurrence rates.

HS-SURGICAL THERAPIES-
ELECTROSURGERY:
- Like Cryosurgery.
- Destruction of abscess or nodule
- Best for smaller lesions.
- Recurrences common.


**HS-SURGICAL THERAPIES- Nd-YAG LASER**
- Hair removal laser.
- May work through anti-inflammatory effects or through impact on hair.
- Seems to work best for early follicular lesions in the axilla.
- High recurrence/persistence altho may improve comfort.

**HS-SURGICAL THERAPIES- EXCISION:**
- May be useful for all stages of lesions: solitary nodules/abscesses or extensive abscesses/sinus tracts.
- Higher risk of recurrences if reconstruction is performed; less with secondary intention healing.
- Important to recognize that the sinus tracts are largely deep dermal; excision to fascia is not normally needed.

**HS-SURGICAL THERAPIES- UNROOFING:**
- Can be done for the acute lesion in the office or ER. Best for a single cavity.
- May need a "Ring Block" for local anesthesia.
- Requires unroofing the cavity, followed by curettage the interior and removal of the gelatinous, bloody material within.
- Secondary intention healing
- Superior to I&D: less recurrence, improves comfort quickly.

**STEEP Technique-Unroofing:**
- "Skin-Tissue-sparing Excision with Electrosurgical Peeling" (STEEP).
- Electrosurgical unroofing, with exploration of margins and base.
- Removes to base of epithelialized cavity.
- Good comfort and healing, but recurrence rates not defined.


**CO2 LASER EXCISION AND MARSUPIALIZATION**
- Lesions: Abscesses, nodules, scars and/or sinus tracts.
- Office or OR. Clean technique.
- All Hurley, Grade I-III stages; facial, scalp and pilonidal lesions.
CO2 LASER EXCISION AND MARSUPIALIZATION-TECHNIQUE
- Local or systemic anesthesia
- CO2 laser used to excise around and beneath chambers of HS
- Controls bleeding in surgical field, allowing for the identification of occult sinus tracts, blind loops and cavities
- CO2 laser used to vaporize base of field
- Secondary intention healing

HS-SURGICAL THERAPIES-CO2 LASER EXCISION AND MARSUPIALIZATION:
- Video

CO2 LASER EXCISION & MARSUPIALIZATION-RESULTS
- In 631 Patients.
- 247 Patients had surgery, in 571 sessions, to 901 areas.
- Groin(314-35%)>Axilla(188-21%)>Buttock(113-12.5%)>Legs.chest,perirectal, pilonidal, scalp, Scrotum(9-1%), neck, ear.
- Ave. surface area: 87 cm^2
AEs: Recurrence, bleeding: < 1.8%. Slow healing, Hypertrophic granulation tissue.

HS: Right Axilla Pre Laser

HS: Right axilla 2 days after Laser

HS Tx area: 3 mo Post CO2 Laser
HS: Left Axilla Pre Laser

HS: Left axilla 2 days after Laser

HS Tx area: 3 mo Post CO2 Laser

HS Patient: Pre-Tx

HS Patient: Post CO2 Laser Tx

Intrasurgical Identification of Sinus Tracts/Cavities:
HS Tx area: Post CO2 Laser Healing

HS-SURGICAL THERAPIES-
Laser Excision-Results
- Immediate improvement in comfort
- No restricted range-of-motion after healing.
- Acceptable cosmesis.
- Improvement in DLQI measurements.
- Improvement in levels of inflammatory markers: sed rate, CRP, High-sensitivity CRP.

HS-SURGICAL THERAPIES-
Conclusions:
- Surgical treatment may be appropriate for all Hurley stages of disease: I, II, III – and for pilonidal, scalp and facial lesions.
- Acute lesions may be treated with intralesionals or unroofing.
- Stage III patients will normally require removal of abscesses, sinus tracts and scars in order to have lasting relief.
- Staged wide local excision, or excision with electrosurgery or CO2 laser, may provide the most effective and lasting results.
- Surgical treatment may be performed in the office, using local anesthesia, for most patients.
- Surgery may be performed without stopping other therapies.

Herbal/Plant “Therapies”:

References:

References (Continued):
References (Continued):