DIAGNOSIS AND THERAPY OF RECURRENT VULVOVAGINAL SYMPTOMS

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(NO DISCLOSURES)

OBJECTIVES

• REVIEW THE TWO MOST COMMON CAUSES OF RECURRENT ABNORMAL DISCHARGE (CANDIDA AND BV)
• REVIEW THE MOST COMMON CAUSES OF VULVAR ITCHING
• REVIEW TREATMENT FOR THESE COMMON COMPLAINTS

BACTERIAL VAGINOSIS

EPIDEMIOLOGY

• MOST COMMON CAUSE OF VAGINITIS
• PREVALENCE VARIES BY POPULATION
  • NHANES: 3,700 SELF-COLLECTED VAGINAL SWABS (SYMPTOMATIC OR ASYMPTOMATIC)
  • 29% IN THE GENERAL POPULATION
  • 50% AFRICAN AMERICAN WOMEN
• IN PREGNANCY LINKED TO PREMATURE RUPTURE OF MEMBRANES, PRETERM DELIVERY AND LOW BIRTH-WEIGHT
• LINKED TO ACQUISITION OF HIV
• DEVELOPMENT OF PID
• INCREASED RISK OF POST OP INFECTION AFTER GYN SURGERY
### Bacterial Vaginosis

#### Microbiology
- **Overgrowth of bacteria species normally present in vagina with anaerobic bacteria.**
- **BV correlates with a decrease or loss of lactobacilli.**
- Acidic vaginal pH normally maintained by lactobacilli through metabolism of glucose/glycogen.
- Hydrogen peroxide is produced by some lactobacilli species.
- Loss of lactobacilli may lead to BV.
- **Biofilm.**

#### Clinical Presentation
- **50% asymptomatic.**
- **Signs/symptoms:**
  - 50% report malodorous vaginal discharge.
  - Most reported after intercourse and after menses.

**BV alone does not cause dysuria, dyspareunia, pruritus, burning or vaginal inflammation. Presence of these symptoms suggest mixed vaginitis.**

#### Diagnosis

**AMSEL Criteria:** (MUST HAVE AT LEAST THREE TO DIAGNOSE)
- Normal pH >5.0
- Presence of >20% per HPF of "Clue cells" or vast amount of "no lactobacillli"
- Positive "whiff" test
- Homosporous, grey-white discharge adherent to vaginal walls

**Other Tools:**
- Vaginal Gram stain
- Culture
- DNA probe
**CLUE CELLS**

EPITHELIAL CELLS COVERED WITH BACTERIA SO MUCH SO THE CELLS APPEAR TO BE COVERED WITH GROUND GLASS

Photo courtesy of Van der Mijden WI.

**BACTERIAL VAGINOSIS**

**TREATMENT**

CDC RECOMMENDED REGIMENS (CHOOSE 1):

1. METRONIDAZOLE 500 MG PO TWICE A DAY FOR 7 DAYS (WARN ABOUT NO ALCOHOL)
2. METRONIDAZOLE GEL 0.75%, ONE FULL APPlicATOR (5 GRAMS) INTRAVAGINALLY ONCE A DAY FOR 5 DAYS
3. CLINDAMYCIN CREAM 2%, ONE FULL APPlicATOR FULL (5 GRAMS) INTRAVAGINALLY AT BEDTIME FOR 7 DAYS

ALTERNATIVE REGIMENS (CHOOSE 1):

1. METRONIDAZOLE 2 G PO IN A SINGLE DOSE (NOT THAT GREAT)
2. CLINDAMYCIN 300 MG PO TWICE A DAY FOR 7 DAYS (WARN ABOUT C-DIFF)
3. CLINDAMYCIN OVULES 100 G INTRAVAGINALLY ONCE AT BEDTIME FOR 3 DAYS

**RECURRENT BACTERIAL VAGINOSIS**

- MORE THAN 3 RECURRENTS IN ONE YEAR
- RECURRENCE IS COMMON. 30% RECUR WITHIN 3 MONTHS, 50% WITHIN A YEAR
- OFTEN RECURRENT SYMPTOMS ARE DUE TO ANOTHER PROCESS

DOCUMENT CLEAR SUPPRESS
RECURRENT BV MANAGEMENT

- CLEAR WITH ANY OF THE CDC RECOMMENDED TREATMENTS OR ALTERNATE TREATMENTS
- TREAT FOR LONGER PERIODS (10-14 DAYS) WITH THE SAME AGENT OR ALTERNATE AGENT
- START SUPPRESSION (SAME OR TOPICAL AGENT TWICE WEEKLY FOR 6 MONTHS)
- CONSIDER CONDOM USE

YEAST MICROBIOLOGY

- CANDIDA SPECIES ARE NORMAL FLORA OF THE SKIN AND VAGINA
- SYMPTOMS (VULVOVAGINITIS) ARE CAUSED BY OVERGROWTH OF C. ALBICANS AND OTHER NON-ALBICANS SPECIES
- YEAST GROWS AS OVAL BUDDING YEAST CELLS OR AS A CHAIN OF CELLS (PSEUDOHYPHAE)
- EXCESSIVE GROWTH = SYMPTOMS
- DISRUPTION OF NORMAL VAGINAL ECOLOGY OR HOST IMMUNITY CAN PREDISPOSE TO VAGINA YEAST INFECTIONS

YEAST MAKING THE DIAGNOSIS

TAKE A GOOD HISTORY
- SIGNS AND SYMPTOMS
- DIABETES?
- IMMUNOSUPPRESSED?

PHYSICAL EXAM
- VULVAR ERYTHEMA / EXCORIATIONS?
- SIGNS OF UCHENIFICATION?
- ABNORMAL DISCHARGE?
- ANY MASSES OR LESIONS?
Yeast - Testing

- Visualization of pseudohyphae and/or budding yeast on saline or KOH wet prep
- pH is generally normal (4.0-4.5)
- If pH is greater than 4.5 consider concurrent BV or trichomoniasis

Yeast - Treatment

Uncomplicated
- Mild to moderate symptoms
- Non-recurrent
- 75% of women have at least one episode
- Responds to short course treatment

Complicated
- Recurrent = 4 or more episodes per year
- Severe (may have fissure formation and deep excoriations)
- Compromised host (ex: pregnancy)
YEAST TREATMENT

UNCOMPPLICATED

ORAL AGENT: FLUCONAZOLE 150 MG ORAL TABLET IN A SINGLE DOSE

INTRAVAGINAL AGENTS: (WWW.CDC.GOV/STD/TREATMENT/2010/DEFAULT.HTM)

BUTOCONASOLE
CLOTRIMAZOLE
MICONAZOLE
NYSTATIN
TICOCONAZOLE
TERACONAZOLE

***SOME CREAMS AND SUPPOSITORIES ARE OIL-BASED AND MAY WEAKEN LATEX CONDOMS AND DIAPHRAGMS

YEAST TREATMENT

COMPLICATED (RECURRENT)

 FLUCONAZOLE 100,150 OR 200 MG Q 3 DAYS FOR 3 DOSES [DAY 1,4,7]
 7-14 OF TOPICAL THERAPY
 BORIC ACID 600 MG GELATIN CAPSULE DAILY FOR 1-4 DAYS
 6 MONTHS
 FLUCONAZOLE 150 MG OR 200 MG WEEKLY OR TOPICAL ANTIFUNGAL WEEKLY
 30-50% OF WOMEN WILL STILL HAVE RECURRENCE AFTER MAINTENANCE IS DISCONTINUED

YEAST TREATMENT

COMPLICATED (RECURRENT OR CHRONIC)

NON-ALBICANS

• BE SURE TO DOCUMENT WITH CULTURE
• NEARLY ALL CHRONIC YEAST IS NON-ALBICANS
• ONCE PROVEN NON-ALBICANS
   600 MG BORIC ACID IN GELATIN CAPSULE FOR 2-14 DAYS (STILL A POISON)
   FLUCYTOCINE – COMPOUNDED ($$$)
   NYSTATIN (POLYENE, NOT AZOLE)
   AMPHOTERICIN – COMPOUNDED VAGINAL SUPPOSITORIES
   CAN TRY COMBINATIONS OF THE ABOVE MEDICATIONS

CLEAR

SUPPRESS
DIFFERENTIAL DIAGNOSIS OF VULVAR ITCH

- Dermatologic
  - Lichen simplex chronicus
  - Contact vulvitis
  - Lichen infarctus
  - Psoriasis
  - Lichen Planus

- Infectious
  - Vulvovaginal candidiasis
  - HPV Infections: ISB, condyloma, SCC
  - Herpes Simplex Virus
  - Dermatophytes (Ring)

- Neuropathic
  - Normal physical exam

Many medications discussed in the next slides are off-label.

There are no FDA approved medications for some vulvar diseases.

There is little evidence based medicine for vulvar disease.

We need more research!

LICHEN SIMPLEX CHRONICUS

- What is it? Chronic end-stage skin condition resulting from persistent irritation that leads to chronic rubbing and excoriation of the vulva — also known as squamous cell hyperplasia (eczema, atopic dermatitis)

- Must exclude lichen sclerosis, contact dermatitis, candidiasis (might be the initiating factor)
LICHEN SIMPLEX CHRONICUS

• Usually occurs in adult women
• History of intense itching and intense pleasure with scratching — creates “itch-scratch cycle”
• Localized to keratinized skin of the vulva, often inter labial sulci, major, posterior labia minora, perineum
• Can look “thickened” (lichenification) with signs of excoriation and erosion, palpable thickened skin
• Can diagnose with biopsy — or can attempt treatment (usually get a good response)
LICHEN SIMPLEX CHRONICUS

TREATMENT: BREAK ITCH-SCRATCH CYCLE! NO ITCHING!

PATIENT EDUCATION
- Eliminate irritants
  - Eliminate detergents, soaps, fabric softeners, perfumes, lubricants
- Treat with steroids
  - Triamcinolone 0.1% ointment versus Clobetasol 0.05% ointment
  - BID 3-4 weeks, then daily 1-2 weeks, then 2X per week
- May need nightly sedative (Atarax/Benadryl)
- Treat inciting/underlying condition (infectious, allergic, irritant or dermatologic)
- Correct barrier function
  - Use emollients judiciously
  - First couple of days – “Soak and Seal”
CONTACT VULVITIS
(ALLERGIC VULVITIS AND IRRITANT VULVITIS)

INFLAMMATORY SKIN CONDITION RESULTS FROM EXTERNAL AGENT ACTING AS AN ALLERGEN OR IRRITANT
• CAN OCCUR IN WOMEN OF ALL AGES
• FREQUENT WITH ITCHING, STINGING PAIN, CUTS AND “RASH”
• OCCURS ON KERATINIZED SKIN, TYPICALLY MAJORA, MINORA, INTERLABIAL SULCUS, PERINEUM AND ANUS
• LOOKS ERYTHEMATOUS, SCALY, EDEMATOUS, EXCORIATED
• DIAGNOSED WITH GOOD HISTORY

CONTACT VULVITIS

• COMMON IRRITANTS VS ALLERGENS

This patient used topical diphenhydramine ---
(Benadryl)
CONTACT VULVITIS

TREATMENT: IDENTIFY AND REMOVE THE OFFENDING AGENT
- TREAT WITH STEROIDS
  - TRIAMCINOLONE 0.1% OINTMENT VERSUS CLOBetasol 0.05% OINTMENT
  - BID 2-4 WEEKS, THEN DAILY 1-2 WEEKS, THEN 2X PER WEEK, THEN OFF
- REDUCE IRRITATION
  - ELIMINATE DETERGENTS, SOAPS, FABRIC SOFTENERS, PERFUMES, LUBRICANTS
- CORRECT BARRIER FUNCTION
  - USE EMOLLIENTS JUDICIOUSLY
  - ELIMINATE EXCESSIVE WASHING

LICHEN SCLEROSUS

A CHRONIC SKIN CONDITION THAT CAN AFFECT THE GENITAL SKIN CAUSING WHITENESS, TISSUE THINNING AND PROGRESSIVE SCARRING
- STRONG EVIDENCE SUPPORTS AUTOIMMUNITY
- PATIENTS COMMONLY HAVE OTHER AUTOIMMUNE DISORDERS (THYROID DISEASE)
- ONSET – PERIMENOPAUSAL, CAN PRESENT AT ANY AGE
- SEVERE ITCH, PAIN, BURNING (*MAY BE ASYMPTOMATIC)
• RESORPTION with loss of normal architecture
• Cellophane-like surface sheen, crinkled, atrophic
• NOT in VAGINA (unless on a prolapse)
• Very rarely in mouth

• Figure of eight or hourglass pattern
• Patterns variable (perianal 30% women)
• Vulvar LS has 4-5% risk SCC
**LICHEN SCLEROSUS - TREATMENT**

- **OPTIMIZE EPITHELIAL BARRIER FUNCTION**
  - Water soaks in lukewarm water
  - Use cool packs to deaden nerves
  - No hot water - no ice packs
  - Seal in moisture with ointments - not cream
- **MANAGE INFECTION (IF PRESENT)**
- **REDUCING HEAT, SWEAT, IRRITATION**
- **STOP IRRITANTS - STOP EXCESSIVE HYGIENE**

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**TOPICAL STEROID OINTMENT:** CLOBETASOL 0.05% OINTMENT TO START: QD OR BID

- Need close follow-up initially (every 1-3 months)
- Once tissue is normal, can adjust therapy
- Duration of therapy: lifelong 2 – 7 days a week

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**LICHEN PLANUS**

- T-CELL MEDIATED
- HYPERSENSITIVITY REACTION PATTERN IN SKIN AND MUCOUS MEMBRANES
- MOST LIKELY TRIGGERED BY AN EXOGENOUS ANTIGEN
  - Drug, chemical, super antigen with resulting immune reaction - injuring the skin and mucous membranes
DEPENDS UPON THE TYPE OF LESION
- Erosion or ulcer – take the edge, from normal to the defect
- White skin – sample the white area, no need for surrounding normal skin
- Thick skin, or looking for tumor, sample involved skin, no need for surrounding normal skin

PERFORMING A BIOPSY

SUMMARY
- NOT ALL ITCHING IS YEAST!
- BIOPSY IF YOU HAVE CONCERN – OR REFER TO SOMEONE WHO WILL
- FOLLOW UP WITH THESE PATIENTS AT SHORT INTERVALS UNTIL SYMPTOMS IMPROVE
THANK YOU

- DR. LYNNE MARGESSON
- DR. HOPE HAEFNER
- ISSVD