VAGINITIS

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OBJECTIVES

- Definitions & Background of Vaginitis
- Common Etiologies of Vaginitis
- Identification & Diagnosis of Vaginitis
- Treatment

DISCLOSURES

- I have nothing to disclose

BACKGROUND

- One of the most frequent reasons for a patient to visit her OB/Gyn or even PCP
- Defined as a spectrum of conditions that cause vulvovaginal symptoms such as itching, burning, irritation and abnormal discharge
- Most common causes are infectious

PATHOGENESIS

- Vaginal Ecosystem - plays an important role in the development of vaginitis
- In a premenopausal woman the squamous epithelium of the vagina is rich in glycogen, which is the substrate for lactobacilli
- This converts glucose into lactic acid which makes the normal vaginal pH acidic at 4.0-4.5
- The acidity helps maintain the normal vaginal flora and inhibit overgrowth of pathogenic organisms

PATHOGENESIS CONTINUED

- Disruption of the normal vaginal environment can lead to development of vaginitis
  - Disruptive factors include: sexual activity, estrogen level, choice of contraception, pregnancy, personal hygiene products, foreign body, antibiotics, etc.

ETIOLOGY

- Bacterial vaginosis
  - 22-50% of symptomatic women
- Vulvovaginal candidiasis
  - 17-39%
- Trichomoniasis and other STI’s
  - 4-35%

ETIOLOGY CONTINUED

- 7-72% of women with vaginitis may remain undiagnosed. In the undiagnosed group, symptoms may be caused by a several other conditions
  - Atrophic vaginitis
  - Vulvar dermatologic conditions
  - Vulvodynia

EVALUATION

- Focused history, covering the spectrum of vaginal symptoms
- Physical exam – vulva, vagina, cervix
- Obtain vaginal sample
  - pH, amine (“whiff”) test, wet prep and KOH microscopy
  - Vaginal cultures or PCR testing can be helpful in select patients

VULVOVAGINAL CANDIDIASIS

- Symptoms include itching, burning, irritation, dyspareunia, burning with urination and thick white discharge
- Diagnosis requires one of the following:
  - Presence of hyphae or pseudohyphae on saline or KOH microscopy
  - A positive culture
- Determine uncomplicated from complicated infection

YEAST TREATMENT

- Oral Fluconazole (Diflucan), Topical Clomtrimazole, Myconazole, Nystatin
- Recurrent infections may require longer term therapy
- Non-albicans may require Imidazole, or Boric acid capsules if not treated adequately with azoles

- * See treatment table for more details on dosing and duration

BACTERIAL VAGINOSIS

- Organisms most commonly found are G vaginalis, Bacteriodes, Prevotella, Mycoplasma, and Peptostreptococcus
- Symptoms include abnormal vaginal discharge with a “fishy” odor
- Diagnosis includes presence of 3 out of 4 Amsel’s criteria
  - Abnormal gray discharge
  - Vaginal pH greater than 4.5
  - Positive whiff test
  - >20% of epithelia clue cells on microscopy

BACTERIAL VAGINOSIS

- In nonpregnant women, BV has been associated with PID, postprocedural gynecologic infections and acquisition of HIV and HSV
- In pregnancy, BV has been associated with low birth weight, PROM and prematurity

BV TREATMENT

- Clindamycin (oral or topical)
- Metronidazole (Flagyl), Metrogel
- Approximately 30% of women will have a recurrence of infection within 3 months after treatment. Those with recurrent infection may require longer duration of treatment

TRICHOMONIASIS AND OTHER STI'S

- To be covered in more detail in Dr. Hansul's lecture

OTHERS

- Most common causes of vaginitis have been discussed
- There are other causes such as atrophy, other vulvar diseases and a term known as desquamative inflammatory vaginitis
  - May need further cultures, topical estrogen, biopsy
  - For desquamative inflammatory vaginitis, a 14 day course of 2% Clindamycin gel can be effective
- In the majority of these cases, the patient has already been referred to an OB/Gyn specialist, which is appropriate

SUMMARY FOR DIAGNOSIS

Vaginitis

Variable	Normal	Yeast	BV	Trich
Sxs	None, Mild/transient	Pruritis, soreness, change in discharge, dyspareunia	Malodorous discharge, no dyspareunia	Malodorous, Purulent discharge, dyspareunia
Signs	--	Vulvar erythema, edema, fissure	Adherent discharge	Purulent discharge, vulvovaginal erythema
pH	4.0-4.5	4.0-4.5	>4.5	5.0-6.0
Amine Test	Negative	Negative	Positive (~70-80%)	Often positive
Wet Mount	PMN:EC ratio <1; Rods dominate Squames +++	PMN:EC ratio <1; Rods dominate; squames +++; Pseudohyphae (about 40%)	PMN:EC <1; loss of rods; increased coccobacilli; clue cells (>90%)	PMN ++++; mixed flora; motile trichomonads (60%)
KOH	Negative	Pseudohyphae (about 70%)	Negative	Negative
Misc	--	Culture if microscopy negative	Culture of no value	Culture if microscopy negative
DDx	Physiologic Leukorrhea	Contact irritant or allergic vulvitis, chemical irritation, focal vulvitis (vulvodynia)	--	Purulent vaginitis, desquamative inflammatory vaginitis, atrophic vaginitis plus secondary infection, erosive lichen planus

TREATMENT SUMMARY

Table 1. Therapy for Vulvovaginal Infections (Drugs Listed Alphabetically)

Indication	Drug	Formulation	Dosage	Duration
Uncomplicated vulvovaginal candidiasis	Butoconazole	2% sustained-release cream	5 g daily	1 day
	Clotrimazole	1% cream	5 g daily	7 days
		2% cream	5 g daily	3 days
		100-mg vaginal suppository	100 mg daily	7 days
		200-mg vaginal suppository	200 mg daily	3 days
		500-mg vaginal suppository	500 mg daily	1 day
	Fluconazole	150-mg oral tablet	150 mg daily	1 day
	Miconazole	2% cream	5 g daily	7 days
		100-mg vaginal suppository	100 mg daily	7 days
		200-mg vaginal suppository	200 mg daily	3 days
		1,200-mg vaginal suppository	1,200 mg daily	1 day
	Nystatin	100,000 units vaginal tablets	daily	14 days
	Terconazole	0.4% cream	5 g daily	7 days
		0.8% cream	5 g daily	3 days
	Tioconazole	2% cream	5 g daily	3 days
		6.5% cream	5 g daily	1 day
Bacterial vaginosis	Clindamycin	2% cream	5 g daily	7 days
		2% sustained-release cream	5 g daily	1 day
		100-mg ovules	100 mg daily	3 days
		300-mg oral	300 mg twice daily	7 days
	Metronidazole	0.75% gel	5 g daily	5 days
		500-mg oral	500 mg twice daily	7 days
Trichomoniasis	Metronidazole	500-mg oral	4 tabs as one dose	1 day
			500 mg twice daily	7 days
	Tinidazole	500-mg oral	4 tabs as one dose	1 day

Data from Sexually transmitted diseases treatment guidelines 2002. Centers for Disease Control and Prevention. MMWR Recomm Rep 2002;51(RR-6):1–78; Sobel JD, Faro S, Force RW, Foxman B, Ledger WJ, Nyirjesy P, et al. Vulvovaginal candidiasis: epidemiologic, diagnostic, and therapeutic considerations. Am J Obstet Gynecol 1998;178:203–11; Cohen L. Treatment of vaginal candidosis using clotrimazole vaginal cream: single dose versus 3-day therapy. Curr Med Res Opin 1985;9:520–3; Faro S, Skobos CE. The efficacy and safety of a single dose of Clindesse vaginal cream versus a seven-dose regimen of Cleocin vaginal cream in patients with bacterial vaginosis. Clindesse Investigators Group. Infect Dis Obstet Gynecol 2005;13:155–60; Gabriel G, Robertson E, Thin RN. Single dose treatment of trichomoniasis. J Int Med Res 1982;10:129–30.

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QUESTIONS?

THANK YOU!