Recommendations for vulvovaginitis diagnostics and therapy

ADVISORY BOARD
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Definition and signs

- Vulvovaginitis is inflammation of the vulva and/or vagina

- Subjective symptoms
  - Discharge
  - Itching
  - Stinging
  - Dyspareunia
- Objective findings
  - Pain during examination
  - Red vaginal mucosa
  - Red vulvar skin

Main nosological units

- Trichomoniasis
  - Protozoal infection
- Vulvovaginal Candidosis (VVC)
  - Yeast infection
- Anaerobic/Bacterial vaginosis (BV)
  - Replacement of fyziological flora by characteristic groups of bacteria
- Aerobic vaginitis
  - Bacterial infection with inflammation

Main nosological units

- Lactobacillosis
  - Presence of so-called fibrous forms of lactobacilli
- Atrophic vaginitis
  - Inflammation of vagina of hypoestrogenic women in case of absence of yeast and trichomonas
- Herpes genitalis
  - Viral infection

Diagnostic criteria

- Trichomoniasis
  - Direct evidence of Trichomonas vaginalis in vaginal flora (microscopic, cultivation or PCR)
- Vulvovaginal Candidiosis (VCC)
  - Characteristic symptomatology and evidence of yeasts (microscopic, in doubt, chronically recurent or non albicans species also by culture)
- Anaerobic/Bacterial vaginosis (BV)
  - Presence of at least three Amsel`s criteria: thin discharge, ph>4.5, postivie amine test, mircosropic evidence of at least 20% clue cells

Diagnostic criteria

- Aerobic vaginitis
  - pH> 5-6, negative amine test, microscopic evidence of coccoid bacteria and toxic leukocytes, absence of lactobacilli, evidence of parabasal vaginal epithelial cells

Diagnostic criteria

- Aerobic vaginitis – Donders criteria

Points	Lactobacilli	Leukocytes	Toxic leukocytes	Other bacteria	Parabasal epithelial cells
0	Exclusive	10/field	None, rare	None	<1%
1	Minority	>10/field and 10/epithelial cells	50%	Coliform	10%
2	Rare, none	>10/epithelial cells	>50%	Cocci	>10%

- Assessment
  - 0-3 points: it is not aerobic vaginitis
  - 3-4 points: slight aerobic vaginitis
  - 5-6 points: medium-serious vaginitis
  - >6 points: serious aerobic vaginits

Diagnostic criteria

- Atrophic vaginitis
  - Presence of hypoestrogenic state
  - Microscopic examination (bacteria and leukocytes are present, lactobacilli are absent)
  - pH >5
  - PAP test – increased proportion of parabasal cells and decreased proportion of superficial cells

Diagnostic criteria

- Herpes genitalis
  - Typical clinical finding,
  - HSV 1,2 testing (Elisa, PCR)

Therapy

- Trichomoniasis
  - Metronidazole 2 g single dose systemic administration
  - 0.25 g 3 times a day for 7 days systemic administration
  - Treatment of all sexual partners

Therapy

- Vulvovaginal Candidiosis (VCC)
  - Topical or systemic antimycotics
  - Therapy of sexual partners is not necessary unless showing symptoms or the VCC is recurrent

Therapy

- Anaerobic/Bacterial vaginosis (BV)
  - Topical application of antibacterial substances effective against anaerobic bacteria (metronidazol, clindamycine, dequaliniumchloride or nifuratel)
- Aerobic vaginitis
  - Topical application of antibacterial substances effective against aerobic bacteria (clindamycine and hydrocortisone, clindamycin and hydrocortisone and estriole in a cream for # months, neomycin, nifuratel)

Therapy

- Lactobacillosis
  - Oral administration of antibiotics of wide spectrum semi-synthetic penicilin (amoxzcilin)
- Atrophic vaginitis
  - Antibacterial preparation effective against aerobic bacteria (neomycin, nifuratel)
  - Vaginal or oral administration of estriole 0.03 to 0.5 mg twice per week, possilby with hyaluronic acid or lactobacilli

Therapy

- Herpes genitalis
  - In early stadium – virostatics (acyclovir, valacyclovir) orally
  - Later only symptomatic therapy (analgesics)

Management of case of acute vulvovaginitis

- Diagnosis
  - Gynecologic examination
    - Exclude other diseases
    - Assesment of discharge type and amount
  - Determination of pH
  - Amine test
  - Wet mount at 400 fold phase contrast microscopy

Management of case of acute vulvovaginitis

- Therapy
  - pH<4.5 the discharge is characteristic for VVC – local administration of antimycotics
  - pH<4.5 the discharge is not typical for VVC – local administration of a combined preparation containing an antimycotic and antibacterial agent (nystatin+nifuratel)
  - pH>4.5, positive amine test. Local or oral administration of an antibacterial agent effective against anaerobic bacteria
  - pH>4.5, negative amine test. Local application of an antibacterial preparation effective against aerobic bacteria or hydrocortisone

Therapy

- Uncertainly or impossible pH examination and/or amine test
  - Local administration of combined preparation containing an antimycotic and antibacterial component effective on both aerobic and anaerobic bacteria (nystatin + nifuratel)
- A symptomatic woman who does not meet of any diagnostic criteria
  - Local administration of combined preparation containing an antimycotic and antibacterial component effective on both aerobic and anaerobic bacteria (nystatin + nifuratel)
  - With serious symptoms, it is possible to consider corticosteroid
  - CAVE Antibiotics or antimycotics could increase the pain in case of vestibulodynia

Usuccesful therapy

- Causes
  - Incorecct diagnosis
    - Readjust therapy
  - Mixed infection and one of components was overlooked
    - Repeat therapy with combined preparate
  - Relapse of BV and VVC
  - Rare nosological units
  - Insuficient dose by trichomoniasis
    - Repeat therapy with double doses
  - Rare resistent straints of yeasts
    - Consider yeast culture with species determination

Relapse

- General principle of management
  - Diagnosis based on the anamnesis, clinical signs and symptoms and wet mount
  - Treatment – long course – 15 days for mycosis and 10 days for other causes
  - If there is a relapse, a repeated diagnosis is required
  - Repeated long course treatment
  - Long term prevention strategies
    - Diabetes, pregnancy, HIV, genital disorders

Relapse

- Prevention after the treatment of a relapse
  - Trichomoniasis – always reinfection
  - VVC
    - Oral administration of antimycotic according to published guideline (Mendling et al.: Mycoses 2015)
    - Antibiotic treatment should be folowed with preventive andministration of antimycotics
    - Traditional recomendation: Avoid tight clothes and underwear, avoid of consuming excessive amounts of sugar
    - Do not alternate anal and vaginal sexual intercourse

Relapse

- BV, aerobic vaginitis
  - Preventive vaginal administration of benzydamine hydrochloride or ascorbic acid or lactobacilli
- Lactobacilosis
  - Preventive vaginal administration of benzydamine hydrochloride
- Atrophic vaginitis
  - Long term topic therapy with low dose estrogens alone or with hyalouronic acid or lactobacilli
- Herpes genitalis
  - Long term oral administration of acyclovir

Rare nosological units

- Irritative vulvovaginitis
  - Deodorants, cosmetics, perfumes, barrier contraception etc.
  - Elimination, in serous cases local corticosteroids
- Allergic vulvovaginitis
  - Allergen identification and elimination

Rare nosological units

- Vestibulodynia
  - Strong pain during vestibule palpation
  - Coitus in difficult or impossible
- Dysaesthetic vulvodynia
  - Focal stining of vulva
  - Antidepressants
- Psychosomatic vulvovaginitis
  - Clinical picture is same as infection
  - Mikrobiological finding is physiological
  - Psychotherapy