SASKATCHEWAN REGISTERED NURSES' ASSOCIATION

RNs WITH ADDITIONAL AUTHORIZED PRACTICE
CLINICAL DECISION TOOL
DECEMBER 1, 2016

VULVOVAGINITIS
(CANDIDIASIS, BACTERIAL VAGINOSIS AND ATROPHIC VAGINITIS)

DEFINITION

Vulvovaginitis is an inflammation and irritation of the vaginal mucosa either from infectious or non-infectious cause. Vulvovaginal candidiasis (VVC), bacterial vaginosis (BV), and atrophic vaginitis (AV) are not considered sexually transmitted diseases.

IMMEDIATE CONSULTATION REQUIRED IN THE FOLLOWING SITUATIONS

- None

CAUSES

- VVC is caused by *Candida albicans* or other Candida species.
- BV is caused mainly by *Gardnerella vaginalis* and other anaerobic bacteria.
- AV is caused by lack of estrogen for a variety of reasons.

PREDISPOSING AND RISK FACTORS

VVC

- Hormone replacement therapy
- Diabetes mellitus
- HIV infection
- Antibiotic use
- Use of panty liners or pantyhose
- Consumption of cranberry juice or acidophil-containing products
- Intra-vaginal oil use
- Immunocompromised client
- Pregnancy
- Lewis blood group non-secretor status
- African American ancestry
- Intrauterine device use (IUD)
- Oral contraceptives
- Increased intercourse frequency/periodicity
- Orogenital sexual activity
- Atopy
- Vaginosis
- Previous history of vaginal candidiasis
- Sex workers and their sexual partners

- Poverty

BV

- History of BV
- Sex workers and their sexual partners
- Smoking
- Secondhand smoke
- Poverty
- Use of spermicidal chemicals
- Vitamin D deficiency in pregnancy
- Cervical *Human papillomavirus* (HPV)
- Women having sex with women
- Increased number of lifetime partners
- Vaginal douche and cleaning with soap

AV

- Anti-estrogenic medication
- Advancing age
- Smoking
- Secondhand smoke
- Vaginal nulliparity
- Menopause
- Radiation
- Chemotherapy
- Lactation
- Oophorectomy or decreased ovarian functioning
- Immune disorder

HISTORY

History and physical findings are typical of a given cause of vulvovaginitis due to the low sensitivity and specificity; they are usually inadequate for a definitive diagnosis. The amount and colour of vaginal discharge may not assist in diagnosing the cause.

Enquire as to the type, duration, and timing of vaginal discharge in relation to menses.

- Vaginal discharge
- Vaginal irritation, or burning
- Itching is reported by 70-90% clients with VVC
- Secondary vulvar irritation, itching, burning
- Superficial dyspareunia (pain at the introitus during intercourse)
- Dyspareunia
- Lack of vaginal lubrication
- Symptoms may be recurrent
- Identify any association with recent antibiotic use
- Urinary symptoms may be present
- Vaginal spotting may be present
- IUD use
- Use of tampons
- Douching
- Smoking
- Secondhand smoke
- Lack of vaginal lubrication with coitus
- Menopause
- Use of anti-estrogenic therapy
- Presence of a "cheesy" discharge increases the likelihood that this is a Candida infection
- Presence of a foul smelling vaginal discharge is more likely in BV

Also enquire about fever, menstrual cycle, pelvic pain, pregnancy, diabetes mellitus, symptoms associated with diabetes, immune suppression, menopause/symptoms suggestive of menopause, medical illness, pregnancy, history of self-medication, sexual history, medication history, surgical history, and lactation.

PHYSICAL FINDINGS

- General features of vulvovaginitis include erythema, pruritus, discharge, irritation, dryness, and pain related to sexual intercourse.
- Examine the external genitalia

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Perform a speculum exam to evaluate for:

- Erythema
- Edema
- Lesions

Vaginal discharge

- Obtain a sample from the vaginal wall to decrease false elevations in pH due to cervical mucus, blood, semen, or other substances.
- Assess discharge for the following:
  - Odour (none to foul-smelling)
  - Volume (scant to profuse)
  - Colour (creamy or whitish-grey)
  - Consistency (thin, homogeneous, or cottage cheese appearance)
  - Adherence to vaginal wall (smoothly coats vaginal wall to adherence)

VVC

- Labial and vulvar erythema and swelling often with fissures and excoriation; vaginal walls covered with adherent white exudate (cottage cheese like); when exudate is removed, underlying area may bleed. Cervix will appear normal.

BV

- External genitalia are usually normal in appearance. Scant-to-moderate grey, foul-smelling ("fishy") discharge. A lack of odour most likely rules out BV.

AV

- Early Stage
  - Vestibule dry and thin
  - Smooth, pale vaginal mucosa; tiny breaks in mucosal surface may be present
- Late Stage
  - Vestibular fissures with or without purulent, noninfectious discharge which may suggest severe AV
  - Loss of labial fat pad results in pendulous labia majora
  - Labia minora less distinct
  - Clitoral prepuce decreases, so clitoris may appear larger

- Vagina loses elasticity and rugal folds
- Vagina becomes shortened, narrower (introital stenosis)
- Vagina easily traumatized

DIFFERENTIAL DIAGNOSIS

- Concurrent Sexual Transmitted Infections (STIs)
- Cystitis
- Normal physiologic discharge
- Vulvodynia
- Dyspareunia
- Trichomoniasis
- Pelvic Inflammatory Disease (PID)

COMPLICATIONS

VVC

- Chronic VVC

BV

- When BV is present preoperatively, there is an increased risk of postoperative complications after gynecological surgery, instrumentation, and procedures.
- BV may result in preterm delivery, low birth weight, prematurity, and premature rupture of membranes, postpartum endometritis.
- May increase the risk of miscarriage
- Urinary tract infection (UTI)

AV

- UTI

INVESTIGATIONS AND DIAGNOSTIC TESTS

As clinical symptoms can present as STIs, conduct appropriate investigations. Obtain a Pap smear if necessary according to the current Saskatchewan "Prevention Program for Cervical Cancer" Guidelines. Refer to the guidelines retrieved from http://www.saskcancer.ca/Cervical%20Guidelines

VVC

- Point of care testing is not necessary as diagnosis is based primarily on clinical presentation.
- For laboratory confirmation, obtain a vaginal swab.

BV

- Point of care testing is not necessary as diagnosis is based primarily on clinical presentation. For laboratory confirmation, obtain a vaginal swab.

AV

- Point of care testing is not necessary as diagnosis is based primarily on clinical presentation.

MAKING THE DIAGNOSIS

VVC

- Diagnosis made in women with symptoms of vaginal itching, vulvar edema, thick, white "cottage cheese" discharge, and/or external dysuria. Culture will be positive for yeast. A provisional diagnosis can be made based upon physical signs and symptoms.

BV

- Diagnosis can be made based upon physical signs and symptoms. Diagnosis is confirmed with receipt of test results.
- BV is not usually associated with soreness, itching, or irritation.

AV

- A provisional diagnosis can be made based upon physical signs and symptoms if trichomoniasis, VVC, and BV can be excluded.
- A confirmed diagnosis of AV can only be made with the results of a vaginal slide.

MANAGEMENT AND INTERVENTIONS

Goals of Treatment

- Differentiate between various causes of vaginitis
- Relieve symptoms
- Identify predisposing factors
- Prevent recurrence

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Appropriate Consultation

- Complicated VVC

Non-Pharmacological Interventions

AV

- Increased sexual activity can reduce the symptoms.

Pharmacological Interventions

VVC

- Asymptomatic: no treatment is necessary
- Symptomatic uncomplicated:
  - Clotrimazole (Canesten) 1% cream 5 g (one applicator full) or 100 mg vaginal tablet intravaginally daily at hs for 6-7 days
    Or
  - Clotrimazole (Canesten) 2% cream 5 g (one applicator full) or 200 mg vaginal tablet intravaginally daily for 3 days
    Or
  - Nystatin 100,000 units vaginal cream 5 g (one applicator full) daily for 14 days
    Or
  - If not pregnant, fluconazole 150 mg orally one dose
- In Pregnancy
  - Clotrimazole (Canesten) 1% cream 5 g (one applicator full) daily for 7 days

BV

- MetroNIDAZOLE (Flagyl) 500 mg orally q12h for 7 days
- Instruct client to abstain from alcohol while taking metroNIDAZOLE because of the Antabuse-like side effects of this drug.
- Consult a physician/RN(NP) for the treatment for those with chronic alcoholism.
- Pregnancy and lactation
  - Asymptomatic women should not be treated.
  - For symptomatic pregnant women treat with 1 of 5 regimens. Some experts advise against the use of metronidazole in the first trimester:
    - MetroNIDAZOLE 500 mg orally q12h for 7 days
    - MetroNIDAZOLE 250 mg orally q8h for 7 days

- Clindamycin 300 mg orally q12h for 7 days
- Intravaginal clindamycin 2% cream 5 g once daily for 7 days
- Intravaginal metroNIDAZOLE 0.75% gel 5 g once daily for 7 days

AV

- Vaginal moisturizers (e.g., Replens) or lubricants (e.g., KY jelly) may be used as a supplemental treatment or as an alternative for clients wishing to avoid estrogen or for whom estrogen is contraindicated.

Client and Caregiver Education

- Counsel client/caregiver about appropriate use of medications (dose, frequency, route, importance of compliance, etc.).
- For VVC and BV, instruct client to abstain from sexual intercourse until symptom-free (or always use non-latex condoms during sexual intercourse).
- Recommend lubricants if AV is present.
- Recommend avoidance of tightly fitting synthetic underwear if Candida infections are recurrent.
- Teach client/caregiver proper perineal hygiene to prevent recurrence; avoid strong, scented soaps, perfumed products, and bubble baths; take showers rather than baths.
- Advise the client and her partner that some vaginal/vulval antifungal treatments (e.g., preparations containing clotrimazole, econazole, fenticonazole, and miconazole) may damage latex contraceptives.
- Advise abstinence or the use of non-latex barrier methods during antifungal use and for several days after finishing the antifungal treatment.

Monitoring and Follow-Up

VVC

- Follow-up in 7-10 days after completion of therapy.
- Check blood glucose level if VVC is recurrent.
- In oral contraceptive pill (OCP) users with frequent infections, the OCP may be a contributing factor.
- Partner treatment is not necessary in most situations.
- For recurrent VVC of unknown cause, it may be helpful to treat the client's

asymptomatic partner (topical clotrimazole 1% cream bid for 7 days) and send swab to rule out Candida glabrata as cause of infection.

BV

- Not necessary if symptoms resolved with treatment.
- Treatment of sexual partner is not usually indicated.

AV

- Follow-up dependent upon symptoms.

Referral

Refer to a physician/RN(NP):

- Recurrent VVC
- Vulvovaginitis that does not resolve with treatment or infection caused by Candida glabatra
- For those clients with AV for whom symptoms persist or are particularly bothersome, after 1 month of treatment with vaginal lubricants/moisturizes

DOCUMENTATION

- As per employer policy

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NOTICE OF INTENDED USE OF THIS CLINICAL DECISION TOOL

This SRNA Clinical Decision Tool (CDT) exists solely for use in Saskatchewan by an RN with additional authorized practice as granted by the SRNA. The CDT is current as of the date of its publication and updated every three years or as needed. A member must notify the SRNA if there has been a change in best practice regarding the CDT. This CDT does not relieve the RN with additional practice qualifications from exercising sound professional RN judgment and responsibility to deliver safe, competent, ethical and culturally appropriate RN services. The RN must consult a physician/RN(NP) when clients' needs necessitate deviation from the CDT. While the SRNA has made every effort to ensure the CDT provides accurate and expert information and guidance, it is impossible to predict the circumstances in which it may be used. Accordingly, to the extent permitted by law, the SRNA shall not be held liable to any person or entity with respect to any loss or damage caused by what is contained or left out of this CDT.