Muco-Purulent Cervicitis

Revision Dates

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Case Definition

**Confirmed Case**
- Inflammation of the cervix accompanied by:
  - A muco-purulent or purulent cervical discharge
  - Cervical bleeding on insertion of a swab
- Negative tests for chlamydia and gonorrhea.
Reporting Requirements

1. **Physicians, Health Practitioners and others**
   - Physicians, nurses, nurse practitioners, midwives, persons in charge of an institution, or operators of a supportive living accommodation as listed in Section 22(3) and 22(4) of the *Public Health Act*, shall notify the Chief Medical Officer of Health (CMOH) (or designate) of all confirmed cases in the prescribed form by mail, fax or electronic transfer within 48 hours (two days). The completed Notification of Sexually Transmitted Infection (STI) form shall be forwarded to the CMOH (or designate) within two weeks of notification. The Notification of STI Form will include:
     - index patient information,
     - laboratory/clinical findings,
     - treatment details and
     - contact information and their treatment.
   - For out-of-zone, out-of-province and out-of-country reports, the following information should be forwarded to the CMOH (or designate) by phone, fax or electronic transfer within 48 hours (two days) including:
     - name,
     - date of birth,
     - current health care number,
     - current address of residence and phone number,
     - attending physician (locally and out-of-province),
     - positive laboratory report (faxed) and
     - date of exposure.

2. **Laboratories**
   - Section 23(b) of the *Public Health Act* (1) requires that all laboratories, including the Provincial Laboratory for Public Health (ProvLab), shall report all positive laboratory results by mail, fax or electronic transfer within 48 hours (two days) to the:
     - CMOH (or designate), and
     - Attending/ordering physician or health practitioner.

3. **Alberta Health Services and First Nations and Inuit Health Branch**
   - The Medical Officer of Health (MOH) (or designate) is responsible for ensuring investigation, treatment and follow-up of all reported confirmed cases and contacts.

4. **Additional Reporting Requirements for Physicians, Health Practitioners and Others**
   - In all cases, where a person under 18 is suspected or confirmed to have an STI, an assessment should be carried out by the clinician to determine if additional reporting is required.
     
     a. **To Child and Family Services**
     The clinician should determine whether there are reasonable and probable grounds to believe that they are in contact with “a child in need of intervention” [as per Section 1(2) of the *Child, Youth and Family Enhancement Act* (2)] and shall report to a director pursuant to Section 4 of the CYFEA (2).

     Reporting is done by contacting the local Child and Family Services office or calling the CHILD ABUSE HOTLINE: 1-800-387-5437 (KIDS). For local office contact information see: [www.child.alberta.ca/home/782.cfm](http://www.child.alberta.ca/home/782.cfm)
b. To Law Enforcement Agency

Consent is a key factor in determining whether any form of sexual activity is a criminal offence. Children under 12 do not have the legal capacity to consent to any form of sexual activity. The law identifies the exception for minors under age 16 years as having the ability to consent, in “close in age” or “peer group” situations. The law recognizes that the age of consent for sexual activity is 16.

Reporting is done by contacting your local City Police Detachment or RCMP Detachment http://www.rcmp-grc.gc.ca/ab/det-eng.htm.

For additional information see: Frequently Asked Questions:
- Age of Consent to Sexual Activity  www.justice.gc.ca/eng/dept-min/clp/faq.html (3)
Etiology
In more than half of the cases of mucopurulent cervicitis (MPC), the cause of the infection is not identified. Organisms that can cause cervicitis include: *Mycoplasma genitalium*, herpes simplex virus, *Trichomonas vaginalis* or *Ureplasma urealyticum*. (5-8) Non-infectious causes of cervicitis include chemical douches, spermicides and deodorants. (9)

Clinical Presentation
MPC is typically asymptomatic however some women experience an abnormal vaginal discharge (yellow-green) or may have vaginal bleeding after intercourse. The cervix may appear red and bleed easily when touched. (6) In some cases (about 20%) there is extension to the upper genital tract with symptoms of endometritis, salpingitis or pelvic inflammatory disease (PID). If the infection goes untreated there is an increased risk of chronic pelvic pain, ectopic pregnancy and infertility.

Diagnosis
Diagnosis is made by visual examination of the cervix and swabbing of the cervical os. The cervix may bleed easily. Diagnosis of MPC should not be made in pregnancy due to poor positive predictive value of any criteria for defining MPC in pregnant women.

Epidemiology
Reservoir
The only known reservoir is humans. (7)

Transmission
Direct sexual contact. (7)

Incubation Period
The incubation period is usually 1 – 3 weeks depending on the organism involved.

Period of Communicability
Unknown.

Host Susceptibility
Susceptibility is universal.

Occurrence
General
Worldwide distribution.

Canada
MPC is not nationally reportable.

Alberta
In 2011, MPC was the fourth most frequently reported STI. Since 2004, the case numbers have ranged from 200 – 360 annually. The rate has fluctuated between 13 and 20, with the highest rate occurring in 2008 of 20.5 per 100,000 females. In 2011, the highest incidence of MPC occurred in women 20 – 24 years of age, closely followed by women aged 25 – 29 years. (10)
Key Investigation

Single

The diagnosis and treatment is performed by community physicians (in the majority of cases) and STI Clinics (Edmonton, Calgary, Fort McMurray).

- Determine the presence or absence of symptoms; note that women may have vaginal discharge without cervicitis. Speculum examination is required to make a clinical diagnosis of cervicitis.
- Determine if risk factors for sexually transmitted cervicitis are present:
  - sexual contact with person(s) with known infection or compatible syndrome,
  - sexually active under 25 years of age with multiple partners,
  - previous STI,
  - vulnerable populations (e.g., sexually active under 25 years of age, use of non-barrier contraception, injection drug use or other substance abuse, incarcerated individuals, sex workers and their clients, street involved/homeless, Aboriginal ethnicity, anonymous sexual partnering, victims of sexual assault).
- Offer testing for HIV and other STI.
- Counsel and identify partners, including locating information.

Control

Management of a Case

- Cases should be interviewed for history of exposure, risk assessment, and sexual partner(s) identification.
- All cases should be instructed about infection transmission.
- Immunization against hepatitis A may be recommended. Refer to Alberta Immunization Policy for immunization eligibility.(11)
- Immunization against hepatitis B is recommended if not already given. Refer to Alberta Immunization Policy for immunization eligibility.(11)
- Patients should abstain from unprotected intercourse until 7 days after initiating treatment.
• If symptoms persist or recur after completed therapy (1 week after initiation of therapy), the patient should be re-evaluated.
• All cases should be provided with individualized STI prevention education, targeted at developing knowledge, skills, attitudes and behaviors to reduce the risk and prevent recurrences of STI.
• All patients with a notifiable STI qualify for provincially funded medications
  ○ STI Services will send replacement medication upon receipt of a Notification of STI Form when the physician mailing address is indicated on the form.
  ○ Physicians and STI clinics may order additional quantities of medication by contacting STI Services.
• Sexual assault in adults should be managed in conjunction with local Sexual Assault Services and other appropriate community support services.
• **Recalcitrant Patients**
  ○ The *Public Health Act* (sections 39 through 52) (1) authorizes detention of recalcitrant patients for medical examination, treatment and/or counselling.
  ○ The CMOH [or designate (section 13(3) of the *Public Health Act*)] or MOH may issue a certificate to detain an individual who is believed to be infected and refuses or neglects to comply with treatment.
  ○ There must be proof of infection or contact with an infected person and documentation of failure to comply with prescribed treatment and medical examination or non-compliance for testing and/or treatment.

**Treatment of a Case**
• All patients should be tested for gonorrhea and chlamydia.
• If cervicitis is diagnosed clinically, immediate treatment is recommended. **Treat presumptively for gonorrhea and chlamydia pending laboratory results** (see below).
• If the patient is known to be negative for gonorrhea, treat only for chlamydia.
• Patients who remain persistently symptomatic 3 – 4 weeks after treatment for gonorrhea and chlamydia and in whom a diagnosis of MPC has been made and persistent or repeat infection with gonorrhea has been ruled out should be treated with doxycycline 100 mg po BID x 7 days.
• Note that a case is classified as MPC for surveillance purposes if the case meets clinical criteria for cervicitis and tests are negative for gonorrhea and chlamydia OR if no tests for gonorrhea or chlamydia are done.
### Indications

| Preferred | Empiric treatment for MPC  
(no tests done or tests collected but result not available) | Empiric treatment for MPC  
(negative tests for gonorrhea and chlamydia) |
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<tr>
<td>Preferred</td>
<td>Cefixime 800 mg po as a single dose <strong>PLUS</strong> Azithromycin 1 g po as a single dose</td>
<td>Azithromycin 1 g po as a single dose</td>
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<tr>
<td>Alternate</td>
<td>Spectinomycin 2 g IM as a single dose <strong>PLUS</strong> Azithromycin 1 g po as a single dose <strong>OR</strong> Azithromycin 2 g* po as a single dose</td>
<td>Doxycycline 100 mg po BID for 7 days</td>
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* Since azithromycin resistance has been reported, this agent should only be used as monotherapy if there is a strong contraindication to the use of cephalosporins (e.g., history of anaphylactic reaction to penicillin or allergy to cephalosporin).

### Pediatric Cases
- If the case is <14 years of age a referral to a pediatrician should be made.
- **Because of the high risk of sexual abuse, it is recommended that all children <14 years of age be managed in consultation with a referral centre in either:**
  - Edmonton:
    - Child and Adolescent Protection Centre
    - Stollery Children’s Hospital, 1C4.24 Mackenzie Health Sciences Centre
    - 8440-112 Street
    - Edmonton, Alberta T6G 2B7
    - Tel: 780-407-1240
  - OR
  - Calgary:
    - Child Abuse Service
    - Child Development Centre
    - Suite 200, 3820-24 Ave NW
    - Calgary, Alberta. T2N 1N4
    - Tel: 403-955-5959

### Management of Contacts - Partner Notification
- Partner notification will identify those at risk, reduce disease transmission/re-infection and ultimately prevent disease sequelae.
- **It is mandated under the Communicable Diseases Regulation that every attempt is made to identify, locate, examine and treat partners/contacts of all cases.**
- Physician/case manager are required to provide partner names and locating information on the Notification of STI Form and forward to STI Services.
- If testing and/or treatment of partners is not confirmed on the Notification of STI Form, STI Services will initiate follow up by a Partner Notification Nurse.
Partner Notification Nurses (PNN) are specially trained to conduct notification of partners and contacts in a confidential manner that protects the identity of the index case.

- The phone number for your designated PNN is available by calling STI Services at: 780-735-1466 or 1-888-535-1466.

- All contacts should be screened for HIV and other STI.
- All contacts should be instructed about infection transmission.
- All contacts should be provided with individualized STI prevention education, targeted at developing knowledge, skills, attitudes and behaviors to reduce the risk and prevent recurrences of STI.
- STI Services initiates follow-up on all out of province/country referrals of cases and partner(s).

**Preventive Measures Ensure appropriate treatment of cases.**

- Interview case and identify and ensure appropriate treatment of sexual partner(s).
- Include information about risk for STI during pre-travel health counseling.
- Make STI services culturally appropriate, and readily accessible and acceptable, regardless of economic status.
- Educate the case, sexual partner(s) and the public on methods of personal protective measures, in particular the correct and consistent use of condoms and discuss safer sex options including:
  - personal protective measures including the correct and consistent use of condoms
  - abstinence,
  - delaying onset of sexual activity,
  - developing mutually monogamous relationships,
  - reducing the numbers of sexual partners,
  - discouraging anonymous or casual sexual activity, and
  - sound decision making.
References


