CHAPTER 13 – WOMEN’S HEALTH AND GYNECOLOGY

First Nations and Inuit Health Branch (FNIHB) Clinical Practice Guidelines for Nurses in Primary Care. The content of this chapter has been reviewed June 2010.

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HISTORY OF PRESENT ILLNESS AND REVIEW OF SYSTEMS

GENERAL
The following characteristics of each symptom should be elicited and explored:

- Onset (sudden or gradual)
- Chronology
- Current situation (improving or deteriorating)
- Location
- Radiation
- Quality
- Timing (frequency, duration)
- Severity
- Precipitating and aggravating factors (for example, medication use)
- Relieving factors
- Associated symptoms (such as fever)
- Effects on daily activities
- Previous diagnosis of similar episodes
- Previous treatments
- Efficacy of previous treatments
- Sexual activity
- Possibility of pregnancy

CARDINAL SYMPTOMS
In addition to the general characteristics outlined above, additional characteristics of specific symptoms should be elicited, as follows:

Menstrual History
- Age at menarche
- Interval, regularity, duration and amount of flow
- Date of most recent menstrual period
- Was most recent menstrual period normal?
- Dysmenorrhea
- Premenstrual symptoms (for example, swelling, headache, mood swings, pain)
- Abnormal uterine bleeding
- Symptoms of menopause
- Age at menopause
- Postmenopausal bleeding
- Use of tampons

Obstetric History
- Number of pregnancies, live deliveries, stillbirths, abortions (spontaneous, therapeutic)
- Difficulties with pregnancies, deliveries
- Birth weight of babies
- History of substance use

Use of Contraception
- Type used (past and present)
- Difficulties with method, suitability
- If discontinued, reasons for doing so

Sexual History
- Sexual orientation
- Regularity of intercourse
- Number of partners in the past 12 months
- Associated symptoms (for example, pain, postcoital bleeding)
- Sexual dysfunction
- Sexual habits and practices

Breasts
- Soreness, tenderness and their relation to menstrual cycle
- Redness, swelling, nipple discharge
- Change in contour, presence of masses
- Is client breast-feeding?

Lymphatic System
- Enlarged, painful nodes (in axillae, groin)

Vaginal Discharge
- Onset, colour, odour, consistency, quantity
- Relation to menstrual period
- Associated symptoms (for example, rectal or urethral discharge, vaginal itch or burning, urinary symptoms, malaise, abdominal pain, fever)
- Relation to medication use (for example, antibiotics, steroids)
- History of previous vaginal or pelvic infections and their treatment
**Pain**
- Onset, location, radiation, character, severity
- Relation to menstruation
- Aggravating and relieving factors
- Use of analgesics and their effect
- Associated gastrointestinal, urinary or vaginal symptoms
- Are pain symptoms related to sexual activity?

**Other Associated Symptoms**
- Ulcerations
- Persistent lesions
- Sense of pelvic relaxation (pelvic organs feel as though they are falling down or out)
- Infertility
- Pelvic infection

**EXAMINATION OF THE FEMALE REPRODUCTIVE SYSTEM**

**GENERAL**
- Apparent state of health
- Appearance of comfort or distress
- Colour (for example, flushed or pale)
- Nutritional status (obese or emaciated)
- Match between appearance and stated age

**VITAL SIGNS**
- Temperature
- Pulse
- Respiratory rate
- Blood pressure
- Weight (to establish a baseline)
- Height (to establish a baseline)

**BREASTS**
- Inspect breasts with client in sitting and then in supine position
- Assess symmetry, contour, skin colour, thickening, dimpling or retraction of overlying skin, veins, redness, streaking
- Examine nipples for symmetry, discharge, erosion, crustling, colour
- Palpate breasts and axillae for consistency, tenderness, masses
- Encourage women to know what is normal for them, to be informed of early symptoms of breast cancer, and to promptly report any changes or concerns
- Encourage screening mammography every 1–2 years for women 50–69 years of age (earlier for women with risk factors and screening prevalence)

Breast self-examination teaching tools:
- An on-line demonstration of breast self-examination can be found at: http://www.breastsexfam.ca/index.html
- The Peter Ballantyne Cree Nation Health Services produced a DVD in 2008 titled: Nanakatawithimino (Take Care of Yourself). It presents women of First Nations’ perspective of mammograms and Pap tests. Copies can be requested via the nursing clerk at: pcuster.pbcnhealth@sasktel.net or (306) 953-4425.

**LYMPH NODES**
Palpate the following areas and identify enlargement, tenderness, mobility and consistency:
- Upper extremity: supraclavicular area, infraclavicular area, axillae, epitrochlear nodes
- Lower extremity: inguinal nodes

**EXTERNAL GENITALIA**
- Distribution of hair
- Labia majora and labia minora: lesions, ulcerations, masses, induration, areas of different colour
- Clitoris: size, lesions, ulcerations
- Urethra: discharge, lesions, ulcerations
- Skene’s and Bartholin’s glands: masses, discharge, tenderness
- Perineum: lesions, ulcerations, masses, induration, scars
- Anus: lesions, ulcerations, tenderness, fissures, hemorrhoids
VAGINA
- Inflammation
- Atrophy
- Discharge
- Lesions, ulcerations, excoriation
- Masses
- Induration or nodularity
- Relaxation of perineum (ask client to bear down and observe for any bulging of vaginal walls)

CERVIX
- Position, colour, shape, size, consistency
- Discharge
- Erosions, ulcerations
- Cervical tenderness
- Bleeding after contact

Consistency of cervical tissue: normal cervix is pink and feels firm, like the tip of the nose; in pregnancy, the cervix is bluish and feels softer, like the lips of the mouth.

UTERUS
- Position
- Size
- Contour
- Consistency of uterine tissue
- Mobility
- Pain on movement

ADNEXA
Ovaries cannot usually be felt unless the client is very thin or the ovaries are enlarged.
- Tenderness
- Masses
- Consistency
- Contour
- Mobility
- Adnexal pain on movement of cervix or uterus (Chandelier’s sign)

CERVICAL CANCER SCREENING
Guidelines for cervical cancer screening vary from one jurisdiction to another. Since cervical cancer is more common among Aboriginal women than non-Aboriginal women and that screening rates are substantially lower among First Nations women than among other Canadian women, the following guidelines can serve as a baseline.

- Screening should occur once a woman is sexually active
- Annual Papanicolaou (Pap) test for all women with multiple partners
- Screen annually until there are 3 negative Pap results then continue every 2–3 years thereafter
- Women who have never had a Pap test, or who have not been screened for over 5 years, should have 3 Pap tests, 1 year apart. If the results of tests are normal, testing can occur every 3 years
- Women over the age of 67 years, with no Pap test for the last 3 years, should be tested at 6-month intervals for a year. If the results of both tests are normal, further testing may not be required
- Women with a total hysterectomy may still require regular Pap tests. This should be discussed with the treating physician or nurse practitioner
- Women require regular testing until age 75 if there is an adequate negative screening history in the previous 10 years (i.e., 3–4 negative tests)

For instructional materials on Pap tests, consider the Alberta Cancer Board’s RN Pap test Learning Module: 2009. Nurses in the Alberta region have access to the electronic version on-line.

Other regions may request a copy by contacting the Alberta Health Services – Cancer Screening Programs at http://www.screeningfortlife.ca/cervical/ or phone 1-866-727-3926.
ABNORMAL UTERINE BLEEDING

DEFINITION
Uterine bleeding that is abnormal in amount, duration or timing. The terms used to describe patterns of abnormal uterine bleeding are based on periodicity and quantity of flow (see Table 1, “Terminology to Describe Abnormal Uterine Bleeding” and Table 2, “Differential Diagnosis of Abnormal Uterine Bleeding”).

Table 1 – Terminology to Describe Abnormal Uterine Bleeding

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amenorrhea</td>
<td>No uterine bleeding for at least 6 months</td>
</tr>
<tr>
<td>Hypermenorrhea</td>
<td>Excessive bleeding in amount but at regular intervals and of usual duration</td>
</tr>
<tr>
<td>Hypomenorrhea</td>
<td>Decreased bleeding in amount but at regular intervals and of usual or shorter duration</td>
</tr>
<tr>
<td>Intermenstrual bleeding</td>
<td>Uterine bleeding between regular cycles</td>
</tr>
<tr>
<td>Intermenstrual bleeding</td>
<td>Irregular, frequent uterine bleeding of varying amounts but not excessive</td>
</tr>
<tr>
<td>Menometrorrhagia</td>
<td>Prolonged or excessive bleeding at irregular intervals</td>
</tr>
<tr>
<td>Menorrhagia</td>
<td>Prolonged or excessive bleeding at regular intervals</td>
</tr>
<tr>
<td>Oligomenorrhea</td>
<td>Bleeding at intervals greater than every 35 days</td>
</tr>
<tr>
<td>Polymenorrhea</td>
<td>Regular bleeding at intervals of less than 21 days</td>
</tr>
</tbody>
</table>
### Table 2 – Differential Diagnosis of Abnormal Uterine Bleeding

<table>
<thead>
<tr>
<th>Types</th>
<th>Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amenorrhea / Oligomenorrhea</td>
<td>Anovulatory cycles, pregnancy, anorexia, bulimia, OCP hormonal imbalance, presence of an intrauterine device (IUD), dysfunctional uterine bleeding, female athletes</td>
</tr>
<tr>
<td>Dysfunctional uterine bleeding (for example, menorrhagia)</td>
<td>Anovulatory cycles</td>
</tr>
<tr>
<td>Bleeding related to cervical disorders</td>
<td>Erosion, polyp, cervicitis, dysplasia, cancer</td>
</tr>
<tr>
<td>Bleeding related to complications of pregnancy</td>
<td>Ectopic pregnancy, spontaneous abortion, hydatidiform molar pregnancy</td>
</tr>
<tr>
<td>Bleeding related to endocrine disorders</td>
<td>Hypothyroidism, hyperthyroidism, Cushing’s disease, hyperprolactinemia, stress (emotional, excessive exercise), polycystic ovarian syndrome, adrenal dysfunction or tumour</td>
</tr>
<tr>
<td>Bleeding related to endometrial disorders</td>
<td>Polyp, dysfunctional uterine bleeding, uterine fibroid, cancer (in postmenopausal women)</td>
</tr>
<tr>
<td>Bleeding related to hematological disturbances</td>
<td>Anticoagulation, blood dyscrasias</td>
</tr>
<tr>
<td>Bleeding related to infection</td>
<td>PID, cervicitis</td>
</tr>
<tr>
<td>Bleeding related to intrauterine devices</td>
<td>Irritation, infection</td>
</tr>
<tr>
<td>Breakthrough bleeding while on OCP</td>
<td>Missed OCP, inadequate OCP absorption, OCP hormonal imbalance (see below), insufficient OCP strength, Pelvic infection</td>
</tr>
<tr>
<td>Breakthrough bleeding in first half of cycle on OCP</td>
<td>Inadequate estrogenic activity of OCP</td>
</tr>
<tr>
<td>Breakthrough bleeding in second half of cycle on OCP</td>
<td>Inadequate progestational activity of OCP</td>
</tr>
<tr>
<td>Postcoital bleeding</td>
<td>Cervical disease, Polyp, Endometrial cancer</td>
</tr>
<tr>
<td>Postmenopausal bleeding</td>
<td>Cervical or atrophic vaginitis, Endometrial cancer</td>
</tr>
</tbody>
</table>

**OCP = oral contraceptive pill, PID = pelvic inflammatory disease.**

### Dysfunctional Uterine Bleeding (DUB)

#### Definition
Abnormal uterine bleeding not caused by pelvic pathology, medications, systemic disease or pregnancy. It is the most common cause (in 90% of cases) of abnormal uterine bleeding but is a diagnosis of exclusion.

### Causes
Usually related to one of three hormonal-imbalance conditions: estrogen breakthrough bleeding, estrogen withdrawal bleeding and progesterone breakthrough bleeding.
Anovulatory Dysfunctional Uterine Bleeding

Anovulation is the most common cause of DUB in reproductive-age women. It is especially common in adolescents. Up to 80% of menstrual cycles are anovulatory in the first year after menarche. Cycles become ovulatory an average of 18–20 months after menarche.

Some women still have anovulatory cycles after the hypothalamic-pituitary axis matures. Weight loss, eating disorders, stress, chronic illness or excessive exercise may all cause hypothalamic anovulation.

Another cause of anovulation is polycystic ovarian disease. This unopposed estrogen state increases the risk of endometrial hyperplasia and cancer.

Some women with chronic anovulation do not fall into any of the above categories and are considered to have idiopathic chronic anovulation.

Ovulatory Dysfunctional Uterine Bleeding

Although less common than anovulatory bleeding, ovulatory DUB may also occur. DUB in women with ovulatory cycles occurs as regular, cyclic bleeding.

Menorrhagia may signify a bleeding disorder or a structural lesion, such as uterine leiomyomas, adenomyosis or endometrial polyps.

Up to 20% of adolescents who present with menorrhagia have a bleeding disorder such as von Willebrand’s disease. Liver disease with resultant coagulation abnormalities and chronic renal failure may also cause menorrhagia.

Polymenorrhea is usually caused by an inadequate luteal phase or a short follicular phase.

Oligomenorrhea in an ovulating woman is usually caused by a prolonged follicular phase.

Intermenstrual bleeding may be caused by cervical disease or the presence of an intrauterine device.

Midcycle spotting may result from the rapid decline in estrogen levels before ovulation.

For other causes of abnormal uterine bleeding, see Table 2.

<table>
<thead>
<tr>
<th>Table 3 – Medications that may Cause Abnormal Uterine Bleeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetylsalicylic acid (ASA)</td>
</tr>
<tr>
<td>Anticoagulants</td>
</tr>
<tr>
<td>Antidepressants such as selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants</td>
</tr>
<tr>
<td>Contraceptives</td>
</tr>
<tr>
<td>Corticosteroids</td>
</tr>
<tr>
<td>Herbs: ginseng, ginko, soy products</td>
</tr>
<tr>
<td>Hormone replacement therapy</td>
</tr>
<tr>
<td>Phenothiazines</td>
</tr>
<tr>
<td>Tamoxifen</td>
</tr>
<tr>
<td>Thyroxine</td>
</tr>
</tbody>
</table>


HISTORY

- Age (for example, reproductive age or menopausal)
- Amount, duration, frequency, interval of bleeding
- Try to determine if cycles are ovulatory or anovulatory (Table 4)
- Date of last normal menstrual period
- Any contraception use (type, whether used properly)
- Hormone replacement therapy if postmenopausal
- Possibility of pregnancy
- Signs of easy bleeding (for example, gums) or bruising suggestive of coagulopathy
- Any pain associated with bleeding
- Past history of gynecological problems such as abnormal Pap smear, fibroids, sexually transmitted infections (STIs), pelvic inflammatory disease (PID), gynecological malignancy, prior episodes of abnormal uterine bleeding
- Past history of thyroid, renal or hepatic disease
- History of strenuous physical exercise (which may cause DUB)
- History of eating disorder or significant emotional or psychological stress
- Date and result of most recent Pap smear
- Date and result of most recent mammography, if screening age (50–69 years)
Table 4 – Characteristics of Ovulatory and Anovulatory Menstrual Cycles

<table>
<thead>
<tr>
<th>Feature</th>
<th>Ovulatory Cycle</th>
<th>Anovulatory Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle length</td>
<td>Regular</td>
<td>Unpredictable</td>
</tr>
<tr>
<td>Premenstrual symptoms</td>
<td>Present</td>
<td>None</td>
</tr>
<tr>
<td>Bleeding</td>
<td>Dysmenorrhea</td>
<td>Unpredictable bleeding pattern; frequent spotting; infrequent, heavy bleeding</td>
</tr>
<tr>
<td>Breasts</td>
<td>Tender</td>
<td>Non-tender</td>
</tr>
<tr>
<td>Basal temperature curve</td>
<td>Biphasic</td>
<td>Monophasic</td>
</tr>
<tr>
<td>Other</td>
<td>Change in cervical mucus</td>
<td>Mittelschmerz</td>
</tr>
</tbody>
</table>

**PHYSICAL FINDINGS**

DUB is a symptom, not a diagnosis. The findings are variable, depending upon underlying cause. The results of the examination may be deceptively normal or obviously abnormal.

A full gynecological examination, including determination of blood pressure and weight and examination of thyroid, breasts, abdomen and pelvic area (bimanual), should be performed.

The pelvic examination consists of careful inspection of the lower genital tract for lacerations, vulvar or vaginal pathology, and cervical lesions or polyps. Bimanual uterine examination may reveal enlargement from uterine fibroids, adenomyosis or endometrial carcinoma.

**DIFFERENTIAL DIAGNOSIS**

*See Table 2, “Differential Diagnosis of Abnormal Uterine Bleeding”.*

**DIAGNOSTIC TESTS**

- Urine pregnancy testing for all patients of reproductive age (HCG)
- Complete blood count (to provide a measure of blood loss and adequacy of platelet count)
- Prothrombin time (PT) and partial thromboplastin time (PTT)
- Levels of thyroid-stimulating hormone (TSH) and prolactin
- Liver function tests (LFTs)
- Urinalysis for hematuria
- Cervical and vaginal samples for culture (gonorrhea and chlamydia)
- Pap smear
- Pelvic ultrasonography if organic pathology is suspected

Anemia is often seen associated with abnormal uterine bleeding. Obtaining a ferritin level is useful.

Endometrial biopsy should be considered early in the investigation of any woman who is > 35 years or who has a history of prolonged exposure to unopposed estrogen and in whom there is no response to initial management strategies.

These tests are to be ordered by a physician or a nurse practitioner.

Endometrial biopsy and ultrasonography should be performed early in the investigation of bleeding in any postmenopausal woman.

Risk of endometrial carcinoma is highest among women who weigh ≥ 90 kg and who are 45 years or older. Other risk factors for endometrial cancer are: history of anovulatory cycles, nulliparity, infertility, use of tamoxifen, and a family history of endometrial or colon cancer. Cervical cancer is more common among Aboriginal women.

**CONCERNS**

Excessive blood loss may be sufficient to cause iron deficiency anemia.

**MANAGEMENT**

**Goals of Treatment**

- Rule out organic pathology
- Regulate menstrual cycles
- Prevent complications

Specific management depends on the underlying cause.
### Premenopausal Women

If the reproductive-age woman is not pregnant, the results of the physical examination are normal, and all pathologic, structural and iatrogenic causes have been excluded, abnormal uterine bleeding is usually dysfunctional in nature and can be managed with hormonal therapy (see Table 5, “Pharmacologic Treatment for Dysfunctional Uterine Bleeding”).

#### Table 5 – Pharmacologic Treatment for Dysfunctional Uterine Bleeding

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Treatment</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premenopausal</td>
<td>OCP</td>
<td>Low-dose (&lt;30 μg) monophasic or triphasic OCP can regulate cycles while providing contraception</td>
</tr>
<tr>
<td></td>
<td>Medroxyprogesterone, 10 mg/day PO for 10 days or Depo-Provera, 150 mg IM q3months</td>
<td>If contraception is not an issue, medroxyprogesterone acetate can be used to regulate cycles; in a woman who has amenorrhea or oligomenorrhea, medroxyprogesterone every 3 months can protect against endometrial hyperplasia</td>
</tr>
<tr>
<td></td>
<td>Naproxen 250 mg q6–8h or 500 mg bid with food. Max daily dose: 1250 mg Ibuprofen 200–600 mg q6h with food. Max daily dose: 2400 mg</td>
<td>Inhibits prostaglandin synthesis, might also alleviate menstrual pain</td>
</tr>
<tr>
<td></td>
<td>Mirena intra-uterine device</td>
<td></td>
</tr>
<tr>
<td>Perimenopausal</td>
<td>Medroxyprogesterone, 10 mg/day PO for 10 days OCP</td>
<td>May be used monthly to regulate bleeding pattern</td>
</tr>
<tr>
<td></td>
<td>Naproxen 250 mg q6–8h or 500 mg bid with food. Max daily dose: 1250 mg Ibuprofen 200–600 mg q6h with food. Max daily dose: 2400 mg</td>
<td>Inhibits prostaglandin synthesis, might also alleviate menstrual pain</td>
</tr>
<tr>
<td>Postmenopausal (receiving HRT)</td>
<td>Cyclic HRT</td>
<td>May consider increasing the progesterone dose if early withdrawal bleeding occurs; increase estrogen dose if intermenstrual bleeding is present</td>
</tr>
<tr>
<td></td>
<td>Continuous combined HRT*</td>
<td>May increase the estrogen dose for 1–3 months to stabilize endometrium; may also try increasing the progesterone dose; if bleeding continues, consider changing regimen to cyclic HRT or using a different type of estrogen</td>
</tr>
</tbody>
</table>

OCP = oral contraceptive pill, HRT = hormone replacement therapy.

*With continuous combined HRT, up to 40% of women have irregular bleeding in the first 4–6 months of therapy (Rubin et al. 1996). Bleeding is more common when hormone therapy is started less than 12 months after menopause occurs.

**Postmenopausal Women**

(See “Menopause” section in this chapter.)

The most serious concern in postmenopausal women with abnormal uterine bleeding is endometrial carcinoma. Of all postmenopausal women with bleeding, 5% to 10% are found to have endometrial carcinoma. Other potential causes of bleeding are cervical cancer, cervicitis, atrophic vaginitis, endometrial atrophy, submucous fibroids, endometrial hyperplasia and endometrial polyps. Any unexpected bleeding that occurs after 12 months of amenorrhea is considered postmenopausal bleeding and should be investigated.

**Women Receiving Hormone Replacement Therapy**

Women receiving hormone replacement therapy often present with abnormal bleeding and, of these, 30% have uterine pathology. Other causes include cervical lesions, vaginal pathology or the hormone therapy itself.

Women receiving sequential hormone replacement therapy may experience midcycle breakthrough bleeding because of missed pills, medication interactions or malabsorption. If unscheduled bleeding occurs in two or more cycles, further evaluation is indicated.

**Appropriate Consultation**

Consult a physician before ordering diagnostic tests and for medication treatment options if urgent treatment is warranted. Obtaining a baseline bone mineral densitometry is indicated if using progesterone replacement or Depo-Provera. Additionally, blood test for 25-hydroxyvitamin D levels for baseline is indicated.

**Monitoring and Follow-up**

- Follow up monthly until cycles have become regular
- Monitor hemoglobin as needed if heavy bleeding continues despite therapy

**Referral**

- Refer electively any client (if she is stable) to a physician for thorough evaluation and treatment

**DYSMENORRHEA**

**DEFINITION**

Painful menstruation with ovulatory cycles

**CAUSES**

- **Primary dysmenorrhea**: normal uterine contraction during menstruation
- **Secondary dysmenorrhea**: endometriosis, use of intrauterine device (IUD), pelvic inflammatory disease (PID)

**HISTORY**

**Primary Dysmenorrhea**

- Begins 6–12 months after menarche
- Pain in low abdomen and back
- Pain wavelike and cramping
- Lasts several hours to several days
- Begins before or at same time as menstrual flow
- Associated symptoms: nausea, diarrhea, headache, flushing, rarely syncope
- May increase in severity over several years
- Usually decreases in severity after birth of first child

**Secondary Dysmenorrhea**

- Begins several years after menarche (when woman is in late 20s to 40s)
- Development of moderate to severe pain
- May begin several days before onset of menses
- Pain may be constant or intermittent
- Aggravated by movement and straining at stool
- May be localized to one area or may radiate over lower abdomen
- Possible associated symptoms: nausea and vomiting, diarrhea or constipation, headache, painful intercourse, vaginal discharge, malaise
- Symptoms may be present throughout the cycle or may begin just before onset of menses and last throughout menstruation
- Dyspareunia may also be noted
PHYSICAL FINDINGS
- Results of physical examination usually normal
- Temperature may be elevated in secondary dysmenorrhea (infection)
- Identify presence of vaginal infection, presence of IUD strings
- Tenderness on movement of cervix and with palpation of uterus may be present
- Identify adnexal masses, enlargement of uterus, enlargement and tenderness of groin nodes

DIFFERENTIAL DIAGNOSIS
- PID
- Endometriosis
- IUD use
- Cervical stenosis
- Hemorrhagic ovarian cyst

COMPLICATIONS
- Absenteeism from work or school

DIAGNOSTIC TESTS
- None

MANAGEMENT
Goals of Treatment
- Differentiate primary from secondary dysmenorrhea
- Relieve symptoms (use of nonsteroidal anti-inflammatory drugs [NSAIDs], heat)
- Identify predisposing factors, underlying causes

Appropriate Consultation
If client is not responding to first-line therapies, arrange elective consultation with a physician.

Nonpharmacologic Interventions
In primary dysmenorrhea, reassure client that no pelvic disease exists and that the condition will likely resolve itself eventually. Most clients presenting with primary dysmenorrhea will require pharmacologic treatment.
- Suggest that client use hot water bottles or warm towels to relieve discomfort

Client Education
- Help client to understand the physiology of the normal menstrual cycle and why pain may occur
- Counsel client about appropriate use of medications (dose, frequency, side effects)
- Teach client pelvic tilt exercises, which may help to alleviate discomfort and backache
- Explain to client that regular exercise may provide some relief

In a client with an IUD, consider IUD malposition or infection. The IUD may have to be removed.

Pharmacologic Interventions
All NSAIDs (except acetylsalicylic acid [ASA]) are effective in about 80% of cases of dysmenorrhea. There appears to be minimal differences in NSAIDs. All should be taken with food. They may be required for 48 hours after the onset of menses.

To manage mild symptoms of primary dysmenorrhea in the young, healthy client, 2 commonly used NSAIDs are:
- ibuprofen (Motrin), 400 mg PO q4–6h prn (maximum 2400 mg/24 hours)
- naproxen (Naprosyn), 250 mg tab, 2 tabs PO stat, then 1 tab PO q6–8h prn (maximum 1250 mg/24 hours)

If client is young, healthy, sexually active and also requires birth control, start oral contraceptive pills (OCP).

For information about oral contraceptives, see Table 6 and Table 7.

In a woman with moderate or severe dysmenorrhea, starting NSAID preparations before the menstrual flow begins results in better pain control. Regular dosing provides better control than prn dosing.

NSAIDs are contraindicated in clients with allergy to ASA or previous history of active peptic ulcer and previous history of GI bleed. Use with caution in clients with asthma, especially severe cases.

Monitoring and Follow-Up
Review symptoms in 6 months.

Referral
Refer to a physician if there is a suspicion of a secondary cause of dysmenorrhea or if treatment fails to control symptoms.
BREAST LUMPS

DEFINITION
A mass or irregularity in the breast. May be single or multiple.

CAUSES
- Fibrocystic breast changes
- Cyclic hormonal effects on normal breast tissue
- Benign breast disease
- Malignant disease
- Trauma (hematoma)
- Infection with duct obstruction
- Lactation

HISTORY
- Discovery of a lump in the breast
- Identify stage in menstrual cycle when lump was found (breasts may feel lumpy before or during menstruation)
- Identify previous history of breast lumps
- Inquire about pain, nipple discharge, redness of breast, skin changes, lactation
- Medication use (for example, OCP)
- Past history of breast disease or family history (in first-degree female relatives) of breast disease
- Recent history of trauma to breast
- Presence of fever or systemic signs of illness
- Recent pregnancy, childbirth and breast-feeding

PHYSICAL FINDINGS
- Inspect breasts with client sitting up, first with arms at sides, then with arms raised above the head
- Repeat inspection with client lying down
- Assess asymmetry with respect to size, shape, contour
- Check for redness, dimpling or thickening of skin
- Look for nipple discharge or crusting
- Palpate breast and axilla with client sitting and lying down
- Identify lumps, tenderness, warmth, nodes
- Have client show you where she felt the lump
- Describe lump in terms of size, discreteness, consistency (for example, hard, firm, soft, fluid-like), contour, mobility and position

DIFFERENTIAL DIAGNOSIS
- Carcinoma
- Benign breast disease
- Mastitis with or without abscess

DIAGNOSTIC TESTS
- Consider diagnostic mammogram; discuss with physician
- Arrange breast ultrasonography if a lump is discovered; discuss with physician
- Arrange mammography screening every 1–2 years from 50–69 years of age
- Screen more frequently if client is at higher risk such as premenopausal breast cancer in mother or first degree relative, for which screening begins at age 40

MANAGEMENT

Goals of Treatment
- Rule out serious pathology quickly

Appropriate Consultation
Consult a physician as soon as possible if a breast lump is discovered.

Client Education
- Follow up benign breast lumps at regular intervals and instruct client to return to clinic if changes are noted
- Provide teaching and support before any investigative procedures

Referral
In collaboration with physician, arrange referral to surgeon as soon as possible for definitive diagnosis.

MASTITIS

DEFINITION
Inflammation and infection of the breast that occurs in 1% to 3% of nursing mothers, usually within the first 3 postpartum weeks.

CAUSES
- Usually Staphylococcus aureus, occasionally Streptococcus
**Risk Factors**
- Engorgement/stasis
- Improper nursing technique
- Inadequate breast hygiene
- Cracked nipples
- Past mastitis
- Diabetes

**HISTORY**
- Recent parturition (2 weeks or more before presentation)
- Affected breast(s) hard and red
- Intense pain in breast
- Associated fever and chills

**PHYSICAL FINDINGS**
- Temperature elevated, chills
- Heart rate rapid
- Client in moderate distress, fatigued
- Breast that is swollen, red and warm to touch
- Nipples may be excoriated, cracked or caked with milk
- Area of induration
- Breast pain
- Fluctuance may be detected (which indicates an abscess)
- Axillary nodes enlarged and tender
- Malaise or myalgia

**COMPLICATIONS**
- Abscess
- Cessation of breast-feeding because of pain, which may lead to further congestion of breast
- Sepsis

**DIAGNOSTIC TESTS**
- No specific diagnostic test is needed

**MANAGEMENT**

**Goals of Treatment**
- Eradicate infection
- Prevent condition (through education about proper breast care)

**Nonpharmacologic Interventions**
- Warm compresses qid for comfort
- Regular emptying of involved breast q6h by a combination of nursing and manual expression is important
- Increase fluid intake

**Client Education**
- Discuss infant’s nutritional habits
- Counsel client about appropriate use of medications (dose, frequency)
- Recommend that client continue breast-feeding or use a breast pump to relieve engorgement and prevent further stagnation of milk
- Counsel client about improving breast hygiene to prevent further infection and relieve cracked nipples
- Suggest use of properly fitting support bra to reduce pain

**Pharmacologic Interventions**
- Suggest application of topical lanolin to heal cracked nipples and prevent future cracking

**Topical Breast Candidiasis (and mouth thrush in infant)**
Sore nipples may be a sign of topical breast candidiasis. Mother and infant should both receive treatment.

**Mother:**
- clotrimazole 1% cream bid for 7–14 days, to be applied after a breastfeeding session

**Infant:**
- nystatin solution 100,000 U (or 1 mL) qid for 7–10 days. Instruct the mother to apply the nystatin to the baby’s mouth with a cotton swab or with an oral syringe, especially to any white patches.6,7
Mild-to-Moderate Mastitis
Oral antibiotics:
- cloxacillin 500 mg PO qid for 7–10 days
If no response within 24–48 hours change to:
- cephalexin 500 mg PO qid for 7–10 days
For clients with allergy to penicillin:
- clindamycin 150–300 mg PO qid for 7–10 days
Antipyretics and analgesia for fever and pain:
- acetaminophen (Tylenol), 325 mg, 1–2 tabs PO q4–6h prn
  or
- ibuprofen (Advil), 200–400 mg PO q4–6h prn
Monitoring and Follow-Up
- Follow up in 24 and 48 hours
- Monitor for development of an abscess

MANAGEMENT OF SEVERE MASTITIS
For any patient who appears acutely ill, with fever and malaise, the following recommendations apply.

Adjuvant Therapy
Start IV therapy with normal saline to keep vein open.

Consultation and Pharmacologic Interventions
Consult physician about IV antibiotics; the following initial dose can be used:
- cefazolin 1–2 g IV q8h for 7–10 days
  or
- cloxacillin 1 g IV q6h for 7–10 days
For clients with allergy to penicillin, consider clindamycin as an alternative.

Referral
Transfer to hospital, as surgical incision and drainage may be needed.

HUMAN PAPILLOMAVIRUS
(GENITAL WARTS)

DEFINITION
The human papillomavirus (HPV) is a sexually transmitted organism. The most common STI, it affects approximately 555,000 Canadians annually. Condylomata acuminata, genital warts and venereal warts are other names for HPV.

CAUSES
HPV, a slow-growing DNA virus of the papovavirus family, is the causative organism. There are 100 known HPV types that can infect humans. The virus is spread by skin to skin contact. Most infections are unnoticed and resolve spontaneously within 24 months. Warts may appear as early as 1–2 months after exposure, but most infections remain subclinical.

Risk Factors
- First coitus at young age
- Multiple sexual partners
- History of transmitted infections
- Associated risk with current and past cigarette smoking

PRIMARY PREVENTION
- Early education of general information about HPV
- Abstinence is the best way to prevent HPV infection but must include avoidance of penetration of the vagina or anus, any anogenital contact, and the sharing of sex toys
- The use of condoms has some efficacy against HPV
- Reducing the number of sexual partners
- Prophylactic vaccination may represent the best primary prevention method. Currently available, Gardasil is recommended by NACI for girls and women aged 9–26 years. The primary age group is females aged 9–13 years. The vaccine is delivered in a 3-dose series. This vaccine may or may not be publicly funded
- Gardasil protects against 2 HPV strains (16 and 18), which are estimated to cause about 70% of cervical cancers
HISTORY
- Painless genital “bumps” or warts
- Pruritus
- Bleeding during or after coitus
- Malodorous vaginal discharge
- Dysuria
- Wartlike growths on genital area that are elevated and rough or flat and smooth
- Lesions occurring singly or in clusters, from < 1 mm in diameter to cauliflower-like aggregates
- Papillomas that are pale pink in colour

PHYSICAL FINDINGS
Wartlike growths on genital area that are elevated and rough or flat and smooth. Flat warts are usually caused by high-risk rather than low-risk HPV.

DIFFERENTIAL DIAGNOSIS
- Condylomata
- Molluscum contagiosum
- Carcinoma

DIAGNOSTIC TESTS
- Cytology: Pap smears are useful for screening; however, Pap smear results of koilocytosis, dyskeratosis, keratinizing atypia, atypical inflammation and parakeratosis are all suggestive of HPV
- Request HPV screening with a Pap if the laboratory does not automatically provide it
- Histology: colposcopy with directed biopsy is diagnostic for subclinical lesions, dysplasia and malignancy

MANAGEMENT
Consultation
Consult a physician for medication order to treat external warts.

Nonpharmacologic Interventions
Client Education
- Reassurance
- Explain to client that therapy eliminates visible warts but does not eradicate the virus and that no therapy has been shown to be effective in eradicating HPV
- Stress that ablation of warts may decrease viral load and transmissibility

- Advise client to abstain from genital contact while lesions are present; advise client that partner should use a condom
- Explain the recurrence rate of 33% even 1 year after apparent cure

NOTE: The practice of applying 3% acetic acid (vinegar) to lesions is not recommended and has no value in screening.9

Pharmacologic Interventions
- Therapy is not recommended for subclinical infections (absence of exophytic warts)
- For clinical manifestations of warts:

Office based treatments:
- podophyllin 10–25% applied to the wart but not contiguous skin; must be washed off in 1–4 hours. Do not use during pregnancy.
Contact physician for self-administered treatment, which can be either:
- imiquimod self-applied 3 times a week (with at least one day between applications) for up to 16 weeks; should be washed off after 6–8 hours. Do not use during pregnancy.
- podofilox/podophyllotoxin 0.5% solution self-applied to warts (but not contiguous skin) every 12 hours for 3 days of each week (4 days off); should not be used for the treatment of cervical, meatal, vaginal or anal warts. Do not use during pregnancy.
- Petroleum jelly may be applied to surrounding skin for protection of unaffected areas
- If warts remain unresolved after six applications, consider other therapy

Monitoring and Follow-Up
- Short-term follow-up is not recommended if patient is asymptomatic after treatment
- Ongoing follow-up should include annual Pap smears and pelvic exams
- Encourage patient to examine her own genitalia
- Consider providing vaccination with Gardasil vaccine

There is a known association between HPV infection and later development of cancer of the cervix. Therefore, annual Pap smear screening is essential for women with HPV.
**Clinical Practice Guidelines for Nurses in Primary Care 2010**

**Women’s Health and Gynecology 13–15**

**Referral**

Consult or refer client to physician if lesions persist after 6 consecutive treatments, when cervical or rectal warts are diagnosed, or if patient is pregnant.

**CONTRACEPTION**

**DEFINITION**

Prevention of pregnancy.

Additional information on contraception can be found in the “Adolescent Health” chapter in the Pediatric guidelines.

**COUNSELLING ON CHOICE OF CONTRACEPTIVE METHOD**

**Barrier Methods**

- Assess client’s comfort, motivation and compliance with respect to these methods
- Explain proper use and application of condoms
- Explain proper filling and insertion of applicators with gel and foam
- If available and able, fit client with an appropriate-size diaphragm, or refer to physician for fitting

- Demonstrate insertion and ask client to give return demonstration
- Relative contraindications to diaphragm use: recurrent cystitis and previous history of toxic shock syndrome

**Preventing Ovulation – Oral Contraceptive Pill, Depo-Provera Injections**

- Prevents pregnancy by preventing release of ovum and causing changes in cervical mucus, endometrial lining and tubal motility
- Teach client how to take the OCP (she should take the pill at the same time each day and should not miss any pills)
- Instruct client to return to clinic if headaches, leg pain or swelling, amenorrhea or breakthrough bleeding develop
- Instruct client about “back-up”: refer to table 5.1

**Table 5.1 – Recommendations for missed combined oral contraceptive doses**

<table>
<thead>
<tr>
<th>Circumstance</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>One missed dose in first week (&gt; 24 hours late)</td>
<td>Take one active pill ASAP and continue pack as usual. Use back-up contraception for 7 consecutive days</td>
</tr>
<tr>
<td>Missed &gt; 1 dose in first week</td>
<td>Take one active pill ASAP and continue pack as usual. Use back-up contraception for 7 consecutive days. Assess for emergency contraception.</td>
</tr>
<tr>
<td>&lt; 3 missed doses in week 2 or 3</td>
<td>Take one active pill ASAP and continue pack as usual. Eliminate the hormonal-free interval for that cycle and start new pack. Consider need for back-up contraception.</td>
</tr>
<tr>
<td>≥ 3 missed doses during week 2 or 3</td>
<td>Take one active pill ASAP and continue pack as usual. Eliminate the hormonal-free interval for that cycle and start new pack. Use back-up contraception until 7 consecutive days of correct use are established.</td>
</tr>
<tr>
<td>Hormonal-free interval &gt; 7 days</td>
<td>Assess for emergency or back-up contraception</td>
</tr>
<tr>
<td>Repeat omissions or failure to use back-up contraception</td>
<td>Assess need for emergency or back-up contraception. Counsel on use of contraception that may require less compliance</td>
</tr>
</tbody>
</table>


Available at: [http://www.sogc.org/guidelines/documents/gui219ECO0811.pdf](http://www.sogc.org/guidelines/documents/gui219ECO0811.pdf)

**Preventing Implantation – Intrauterine Device (IUD)**

- Explain how IUD prevents pregnancy
Absolute contraindications: past history of PID, active pelvic infection
Usually contraindicated in nulliparous women
Relative contraindications: history of repeated sexually transmitted infections, multiple partners, previous ectopic pregnancy, heavy periods and dysmenorrhea

**Sterilization – Tubal Ligation and Vasectomy**

If this method is requested, both partners should be present for counselling if desired
Clients must be absolutely certain that they do not desire any more children, as these procedures are, for all intents and purposes, irreversible
Tubal ligation via laparoscopy: with client under general anesthesia, a small incision is made in the abdomen and fallopian tubes are cut and tied
Vasectomy: vas deferens is cut and tied off (can be performed in the office under local anesthesia)
Both procedures involve some discomfort and risks, which must be explained.

**Prescribing Oral Contraceptives**

Choice of OCP depends on a variety of factors:

- Contraindications to OCP use must be absent (see Table 7)
- Characteristics of usual menstrual flow (light, moderate or heavy)
- Presence of dysmenorrhea
- Characteristics of skin (oily, acne, hirsute)

OCP should be chosen according to client’s profile. Patients are commonly started on an OCP containing low dose estrogen (< 30 μg such as Alesse). For complete OCP options, consult physician for specific patient needs.

**Situations in which Close Monitoring is Needed**

- Client has depression
- Client has epilepsy
- Family history of dyslipidemia
- If after elective surgery, immobilization is foreseen, consider discontinuation of the OCP. Discuss recommendation for an antithrombotic prophylaxis with the client and the physician or surgeon

Consult physician, before starting OCP, for clients who have any contraindications, possible or relative (see Table 7) or for clients with any circumstance in which close monitoring is needed (see above). Do not start OCP for any client with any “strong relative contraindication” (see Table 7).

**Monitoring and Follow-Up**

- First follow-up examination should be done at 3 months
- Examinations, including Pap smears, should then be done annually for well women until 3 consecutive normal readings are found, or with the presence of multiple sexual partners
- Encourage and teach breast self-examination
- Demonstrate how to perform a monthly breast self-examination. A video on breast self-exam can be found in the anatomy section of: http://www.breastselfexam.ca/section2slide4.html

**Referral**

Refer to the physician all clients requesting IUDs, Depo-Provera or sterilization.
Table 6 – Principles of Oral Contraceptive Use

**History and physical**
Before OCP can be started, a thorough history and physical examination must be done
Obtain full medical, gynecological and obstetrical history (see Assessment of the Female Reproductive System in this chapter)
In particular, identify chronic disease (for example, cardiac disease, deep vein thrombosis, hypertension, migraines, pelvic disease, pelvic infection, pelvic surgery, epilepsy) or medications that might interfere with OCP
Review past use of birth control: methods, effectiveness, problems, reason for discontinuation, specific contraindications

**Laboratory testing**
Perform Pap smear and take swabs for Chlamydia and N. gonorrhoeae for any client who has had sexual intercourse
Obtain urine and perform pregnancy test (to rule out pregnancy)

**Initial Dose**
For typical healthy young women, start OCP with daily dose of 30–35 µg estrogen, combined with lowest possible dose of any given progestogen, to provide contraception and good cycle control
Medroxyprogesterone (Depo-Provera), 150 mg IM q3months and any OCP containing 50 µg estrogen. Should only be started by the nurse after consultation with physician.

**In older women (approximately 50 years old)**
As long as client is menstruating, she may become pregnant
Menopause is reached when a woman has her last menstrual period, with natural menopause being confirmed when 12 months have passed without menses. Contraception may be stopped upon reaching menopause
Low-estrogen (20 µg) combination OCPs are useful, provided the woman is a nonsmoker with no contraindications for OCP

**Postpartum: client not breast-feeding**
Clients who are not breast-feeding can expect menstruation to resume about 6 weeks postpartum
OCP may be restarted any time after delivery
Depo-Provera should not be given until 72 hours after delivery if client is planning to breast-feed
OCP-enhanced thrombotic episodes are minimal at this time

**Postpartum: client breast-feeding**
Return of menstruation in women who are breast-feeding is highly variable
Ovulation may occur in the absence of menstruation
Lactating clients may be started on progesterone-only OCP (for example, norethindrone [Micronor] or Depo-Provera IM)

**Special notes**
It is unnecessary to give the client a “rest” from her OCP
OCPs may be taken (in the absence of untoward effects) until menopause, as long as any client over 35 who is taking OCP is a nonsmoker
During perimenopause, contraception should be considered
Failure of an OCP has no proven teratogenic effect on the fetus
### Table 7 – Contraindications to Oral Contraceptive Use

<table>
<thead>
<tr>
<th>Absolute Contraindications</th>
<th>Strong Relative Contraindications</th>
<th>Possible Relative Contraindications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoker over the age of 35 (≥ 15 cigarettes/day)</td>
<td>Post-thrombophlebitis</td>
<td>Strong family history of diabetes mellitus</td>
</tr>
<tr>
<td>Hypertension (systolic ≥ 160 mm Hg or diastolic ≥ 100 mm Hg)</td>
<td>Severe headaches</td>
<td>Previous cholestasis during pregnancy</td>
</tr>
<tr>
<td>Current or past history of thromboembolism (VTE) and thromboembolic disorders</td>
<td>Adequately controlled hypertension</td>
<td>Congenital hyperbilirubinemia (Gilbert’s disease)</td>
</tr>
<tr>
<td>Coagulation factor deficiency</td>
<td>Hypertension (systolic 140–159 mm Hg, diastolic 90–99 mm Hg)</td>
<td>Impaired liver function at the time of presentation or within the past year</td>
</tr>
<tr>
<td>Cerebrovascular disorders</td>
<td>Migraine headache over the age of 35</td>
<td>Known unreliability and low likelihood of taking the pill correctly</td>
</tr>
<tr>
<td>Ischemic heart disease, coronary artery disease</td>
<td>Symptomatic gallbladder disease</td>
<td></td>
</tr>
<tr>
<td>Known or suspected cancer of the breast</td>
<td>Infectious mononucleosis, with hepatic involvement</td>
<td></td>
</tr>
<tr>
<td>Known or suspected pregnancy</td>
<td>Mild cirrhosis</td>
<td></td>
</tr>
<tr>
<td>&lt; 6 weeks postpartum if breast-feeding</td>
<td>History of combined OCP-related cholestasis</td>
<td></td>
</tr>
<tr>
<td>Liver tumour (adenoma or hepatoma)</td>
<td>Elective major surgery planned in the next 4 weeks or major surgery requiring immobilization</td>
<td></td>
</tr>
<tr>
<td>Undiagnosed abnormal genital bleeding</td>
<td>Long-leg cast or major injury to lower leg</td>
<td></td>
</tr>
<tr>
<td>Migraine with aura or focal neurological symptoms</td>
<td>&gt; 35 years of age and currently a heavy smoker (&gt; 15 cigarettes/day)</td>
<td></td>
</tr>
<tr>
<td>Diabetes with retinopathy/nephropathy/neuropathy</td>
<td>Use of medications that may interfere with OCP metabolism (antiepileptic, antipsychotic)</td>
<td></td>
</tr>
<tr>
<td>Severe cirrhosis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Combined Hormonal Contraception

**Low Estrogen:**
- ethinyl estradiol (EE) 20 µg and levonorgestrel 100 µg (Alesse)

### Injectable Contraceptive

- medroxyprogesterone (Depo-Provera) 150 mg IM every 3 months

The SOGC guidelines recommend that healthcare providers carefully weigh the risks and benefits of Depo-Provera before prescribing this medication. Patients should be informed about potential decrease in bone density. Also recommended is counselling on ways to improve “bone health” such as calcium, Vitamin D supplementation and smoking cessation, weight-bearing exercise and decreased alcohol and caffeine consumption.

Vitamin D deficiency is common among Aboriginal people. Evidence is growing that vitamin D requirements vary with weight and with BMI. A minimum of 800 IU/day to 1000 IU/day may be needed for adults (aged 19–50). The SOGC recommends that healthcare providers carefully weigh the risks and benefits of Depo-Provera before prescribing this medication. Patients should be informed about potential decrease in bone density. Also recommended is counselling on ways to improve “bone health” such as calcium, Vitamin D supplementation and smoking cessation, weight-bearing exercise and decreased alcohol and caffeine consumption.

### Emergency Oral Contraception

#### Definition

The use of hormonal medications within 120 hours (5 days) of unprotected or inadequately protected intercourse for the prevention of unintended pregnancy.

#### Protocols for Emergency Hormonal Contraception

Levonorgestrel (Plan B) tablets contain only the progestin levonorgestrel. The Plan B regimen is the preferred method of emergency contraception because it is more effective and has a lower incidence of side effects than the alternative.

Maintenance of confidentiality in small and rural communities can be particularly problematic and is a known barrier to care. It is paramount that sound confidentiality measures be in place and adhered to by all health providers. Emergency oral contraception can be a particularly sensitive subject. Fear of breach in confidentiality may cause individuals to avoid or delay necessary treatment.
**Mechanism of Action**
- Unknown
- Thought to primarily inhibit ovulation
- Might slow the movement of the ovum and sperm in the fallopian tubes
- Might prevent fertilization
- Might interfere with the maturation of the corpus luteum
- Depends on when during the cycle the emergency contraception is taken

**Efficacy: Plan B Regimen**
- Effective in 95% of cases when used within 24 hours of intercourse
- Effective in 85% of cases when used 25–48 hours after intercourse
- Effective in 58% of cases when used 49–72 hours after intercourse

**Indications for Use**
- Unprotected intercourse within the preceding 72–120 hours
- Inadequately protected intercourse within the preceding 72–120 hours; this can include, but is not limited to:
  - missing 2 or more consecutive oral contraceptive pills
  - slipped or broken condom

**Contraindications for Use**
- Known pregnancy
- Undiagnosed abnormal vaginal bleeding
- Hypersensitivity to any component of the drug(s)

**Breast-feeding and Pregnancy Considerations**
- Emergency contraception will not interrupt a pregnancy that has already implanted in the uterine lining
- There are no known teratogenic effects if progestin-only emergency contraception is taken during pregnancy
- Emergency contraception can be given to a woman who is breast-feeding

**HISTORY**
- Date and characteristics of last menstrual period to estimate potential time of ovulation and risk of pregnancy
- Time of most recent unprotected or inadequately protected intercourse
- Current use of any other contraceptive methods (for example, condoms)
- Use of emergency contraception in the past
- Assess STI exposure risk
- Concurrent medical conditions (for example, diabetes, hypertension, migraines)
- Medications
- Allergies

If the woman was the victim of assault or abuse, maintain the chain of evidence and commence with a complete history, physical examination and plan of care appropriate to the situation.

**LABORATORY INVESTIGATIONS**
- Urine pregnancy (human chorionic gonadotropin [HCG]) test
- STI specimens, if indicated

A pelvic exam is not necessary before prescribing emergency hormonal contraception. A urine HCG is not required before use of emergency contraception; however, if the client is seen in person, a urine HCG is usually documented.

**MANAGEMENT**

**Nonpharmacologic Interventions**
**Client Education**
- Advise client about potential side effects (for example, nausea, vomiting, abdominal pain, fatigue, headache and breast tenderness)
- Advise the client that a normal period should occur within 3 weeks of using emergency contraception
- Client should be counselled to use a backup method of contraception until the next menstrual cycle
- If the client has diabetes, provide education regarding blood glucose monitoring and request an earlier follow-up because the effect of progestin on blood glucose levels is not known
Pharmacologic Interventions:
Plan B Regimen
levonorgestrel (Plan B), 0.75 mg, 2 doses PO; both doses can be taken at the same time

MONITORING AND FOLLOW-UP
When emergency contraception is prescribed, the client should be seen at follow-up by a healthcare provider if she has not had a menstrual period within 3 weeks or after the next menstrual period
– To test for pregnancy
– To assess the need for STI testing
– To discuss more effective contraception
– For education regarding safe sexual practices
– There does not appear to be any adverse risk with repeated use of progestin-only emergency contraception; however, repeated use of emergency contraceptives requires further counselling and education on contraceptive choices

Follow-Up Visit Checklist
History
– Record date and characteristics of last menstrual period
– Check for abnormal vaginal bleeding pattern
– Vaginal discharge
– Significant side effects of emergency contraceptive use
– Previous pregnancies/therapeutic abortions
– Significant medical illnesses (for example, deep vein thrombosis)
– Diabetes, heart disease, vascular problems
– Previous surgeries
– Medications
– Check date of last Pap test; repeat as needed
– Screen for STIs as needed

Health Promotion/Disease Prevention
Discuss and provide materials, as appropriate, concerning:
– Safe sex practices
– Future use of emergency contraception
– STI prevention
– Breast self-examination
– Smoking cessation

Current Contraception
– Method chosen and date initiated
– Missed pill guidelines for oral contraceptives
– Advance prescription of emergency contraceptive

Consultation/Referral
– Consult and refer to physician as needed (for example, for medroxyprogesterone [Depo-Provera] prescription)
– Refer to a physician if the possibility of pregnancy or irregular bleeding has occurred

MENOPAUSE
DEFINITION
Cessation of menses, resulting from loss of ovarian follicular activity, for at least one full year in a previously menstruating female. Menopause is reached when a woman has her last menstrual period, with natural menopause being confirmed when 12 months have passed without menses. Perimenopause – leading up to menopause, the body produces smaller amounts of estrogen and progesterone – can begin anytime from age 39–51, with the average age being 45 years, and can last 2–8 years.

CAUSES
– Normal aging
– Premature ovarian failure (as in menopause before age 40)
– Surgery
– Radiation
– Chemotherapeutic agents
– Cigarette smoking will reduce the age of menopause proportionally to the number of cigarettes smoked
HISTORY
- Mean age at onset 51 years, usually occurs when a woman is between 45 and 55 years of age
- Irregular menstrual cycles: initially, cycles may be short, with occasional menorrhagia; later, cycles become longer and more spaced out, with scant menstrual flow; eventually, menstruation ceases altogether
- Vasomotor symptoms – hot flashes, night sweats
- Palpitations
- Weight gain
- Vaginal dryness, irritation, itching may be present
- Painful intercourse may be present, postcoital bleeding
- Urinary urgency, frequency and dysuria may be present (because of urethral atrophy), stress incontinence
- Mild-to-severe mood swings may be present
- Anxiety, nervousness may occur (infrequent)
- Sleep disturbances
- Depression may occur

PHYSICAL FINDINGS
- Mood and affect: evidence of depression
- Breast atrophy
- Vaginal introitus smaller
- Vaginal walls smooth, thin, pale, dry
- Cervix small
- Uterus feels small
- Ovaries not palpable
- Weight gain
- Thinning of hair and skin
- Bone demineralization

DIFFERENTIAL DIAGNOSIS
- Abnormal vaginal bleeding
- Infectious cystitis
- Infectious vaginitis
- Pregnancy
- Thyroid or adrenal disorder
- Exercise-induced amenorrhea

COMPLICATIONS
- Difficulties in adjusting to this new stage of life
- Anxiety
- Depression
- Osteoporosis

DIAGNOSTIC TESTS
- Determine levels of follicle-stimulating hormone (FSH) and thyroid-stimulating hormone (TSH) (only if diagnosis is unclear or if the client is less than 40 years of age); menopause praecox, consult physician
- Bone density testing
- Screening mammography every 2 years between the ages of 50 and 69
- Pap requirements in menopause

MANAGEMENT

Goals of Treatment
- Offer support and reassurance
- Prevent complications

Appropriate Consultation
Arrange elective consultation with a physician if symptoms are severe, complications are present, client is less than 40 years of age, or client desires hormone replacement therapy (HRT).

Nonpharmacologic Interventions

Client Education
- Explain process as a normal part of aging
- Assess client’s feelings about aging
- Discuss the risks and benefits of HRT for symptom control
- Encourage balanced nutrition and regular physical activity for physical and mental well-being, weight control
- Encourage client to stop smoking
- Suggest that client keep cool and dress in layers to help with hot flashes
- Advise client to return to clinic if vaginal bleeding occurs at any time after menopause
- Suggest use of lubricants before coitus if intercourse is painful
Pharmacologic Interventions

Although evidence is generally lacking, some herbs and vitamins have provided symptomatic relief in menopause.

Calcium (500 mg PO, 3 times/day) and Vitamin D (< 50 years: 400 IU PO od; > 50 years 800 IU PO od) are recommended as prophylaxis for bone density protection. Vitamin D is required for optimal calcium absorption. See Osteoporosis section, Endocrinology chapter.

Calcium may be contraindicated in patients with a history of renal stones.14

Hormone Replacement Therapy for Symptom Control

Hormone replacement therapy (HRT) for symptom control has a role in symptom relief.

HRT is initiated in consultation with a physician. There are several regimens and several delivery methods (for example, pills, patches, creams for conjugated estrogens). Consult physician for other non-hormonal pharmacologic options.

Monitoring and Follow-Up

– Follow-up 1–2 months after beginning any therapy for menopause, then follow every 6 months if symptomatic
– Measure height of client every year to monitor for osteoporosis
– Any bleeding after menopause must be investigated

Referral

Usually unnecessary unless complications arise.

GYNECOLOGICAL EMERGENCIES

ACUTE PELVIC PAIN OF GYNECOLOGICAL ORIGIN

DEFINITION

Acute abdominal pain due to dysfunction or disease of reproductive tract.

CAUSES

– Unsuspected ectopic pregnancy
– Ruptured or twisted ovarian cyst
– Acute pelvic inflammatory disease
– Severe dysmenorrhea

HISTORY

– Abdominal pain of sudden or gradual onset
– Pain becoming increasingly severe
– Pain made worse with cough, straining at stool or urination
– Pain may be referred to the shoulder tip (for example, in ectopic pregnancy)
– Abnormal vaginal bleeding may have occurred
– Fever, chills and vaginal discharge may be present
– Nausea and vomiting may be present
– Syncope may have occurred

PHYSICAL FINDINGS

– Temperature may be elevated
– Heart rate rapid
– Blood pressure may be normal, reduced or hypotensive
– Check blood pressure and heart rate, both supine and standing, to assess for postural changes
– Client appears in moderate-to-acute distress
– Client may walk slowly, bent over and holding abdomen
– Abdomen appears normal
– Pelvic examination may reveal pus from cervix or bleeding
– Bowel sounds may be reduced or absent
– Lower abdominal tenderness
– Signs of localized or generalized peritonitis may be present
– Bimanual pelvic examination reveals acute cervical motion tenderness
– Adnexal tenderness or mass may be present
– Pregnancy test may be positive
Differential Diagnosis

- Ectopic pregnancy
- Spontaneous abortion
- Pelvic inflammatory disease
- Bleeding corpus luteum cyst
- Adnexal torsion
- Mittelschmerz
- Endometriosis
- Dysmenorrhea
- Cystitis
- Pyelonephritis
- Ureteral stone
- Inflammatory bowel disease
- Irritable bowel
- Bowel obstruction
- Appendicitis

Complications

- Internal hemorrhage with hypovolemic shock
- Sepsis

Diagnostic Tests

- Measure hemoglobin on site
- Obtain complete blood count
- Take urine sample for urinalysis and culture; perform urine pregnancy test

Management

Goals of Treatment

- Relieve pain
- Prevent complications

If pelvic inflammatory disease is suspected see Pelvic Inflammatory Disease.

Appropriate Consultation

Consult a physician as soon as possible, unless the cause has been definitively identified and is minor (for example, mittelschmerz or dysmenorrhea).

Nonpharmacologic Interventions

- Nothing by mouth
- Bed rest
- Consider inserting nasogastric tube if there are signs of peritonitis or bowel obstruction
- Consider inserting a Foley catheter if patient is hemodynamically unstable

Adjuvant Therapy

- Start large-bore IV (14- or 16-gauge) with normal saline
- Adjust rate according to age and state of hydration
- Oxygen, 10–12 L/min or more, by mask prn if client is in shock; keep oxygen saturation > 97%

Pharmacologic Interventions

Analgesia for pain:

- morphine 5–10 mg IM/SC

Monitoring and Follow-Up

Monitor ABC (airway, breathing and circulation), vital signs, and intake and output.

Referral

Medevac as soon as possible if diagnosis is uncertain.

Pelvic Inflammatory Disease (PID)

Definition

Ascending infection of uterus and fallopian tubes. May be acute or chronic.

Causes

- Most common causes: Chlamydia trachomatis, Neisseria gonorrhoeae
- Other causes: anaerobes, Escherichia coli, group B streptococci
- Cause is often polymicrobial
- Noninfective endometriosis

Risk Factors

- Multiple sexual partners
- Partner with multiple sexual partners
- Use of IUD
- Transcervical instrumentation (for example, IUD insertion)

History

May present acutely or subacutely.

- Usually younger, sexually active women
- Multiple sexual partners (five-fold increase)
- Client’s partner has multiple sexual partners
- Use of IUD for birth control
- Lower abdominal pain of recent onset
Clinical Practice Guidelines for Nurses in Primary Care

Women’s Health and Gynecology

– Fever and chills
– Vaginal discharge may be present
– Menstrual disturbance or painful intercourse may be present
– Nausea and vomiting
– Anorexia
– Urinary symptoms
– History of previous STIs

PHYSICAL FINDINGS
– Temperature may be elevated
– Heart rate may be elevated
– Client in mild-to-severe distress
– Abdominal tenderness, with or without rebound
– Purulent vaginal discharge
– Cervical discharge may be present
– Mild-to-severe tenderness on bimanual exam of cervix and uterus
– Cervical motion tenderness
– Adnexal tenderness
– Adnexal fullness, or a mass may be felt
– Signs of peritonitis may be present

DIFFERENTIAL DIAGNOSIS
– Cervicitis
– Ectopic pregnancy
– Adnexal mass with rupture or torsion (for example, twisted ovarian cyst)
– Pyelonephritis
– Appendicitis
– Inflammatory bowel disease
– Diverticulitis
– Endometriosis

COMPLICATIONS
– Recurrent episodes (in 15% to 25% of cases)
– Tubo-ovarian abscess (in 15% of cases)
– Sepsis
– Infertility (prevalence of 12% after one episode)
– Chronic pelvic pain (in 20% of cases)
– Adhesions
– Increased risk of ectopic pregnancy (eight-fold increase in risk)

DIAGNOSTIC TESTS
– Complete blood count
– Vaginal and cervical swabs for culture and sensitivity and to test for N. gonorrhoeae and Chlamydia (urine PCR testing is an alternative if available)
– Urine pregnancy test

MANAGEMENT

Goals of Treatment
– Relieve symptoms
– Prevent complications

Appropriate Consultation
Consult physician for first-line drug therapy. Should antibiotics be required, they can be administered on either an inpatient or outpatient basis

Nonpharmacologic Interventions

Client Education
– Explain disease course, expected outcome and future complications
– Counsel client about appropriate use of medications (dose, frequency, importance of compliance)
– Recommend extra rest during acute phase
– Teach client proper perineal hygiene
– Recommend avoidance of sexual intercourse and avoidance of tampon use until infection is resolved
– Counsel client about safe sexual activity (for example, use of condoms to prevent future episodes)
– Advise client to return to clinic if symptoms worsen or do not improve within 48–72 hours

Pharmacologic Interventions

Outpatient antibiotic therapy:

For non-pregnant clients:
levofloxacin 500 mg PO daily for 14 days AND metronidazole 500 mg PO bid for 14 days

Instruct client to abstain from alcohol while taking metronidazole because of the Antabuse-like side effects of this drug.
or
ceftriaxone 250 mg IM single dose followed by doxycycline 100 mg PO bid for 14 days AND metronidazole 500 mg PO bid for 14 days

If client is pregnant:
Consult physician as PID in pregnancy requires hospitalisation and is considered an emergency.

For clients with allergy to penicillin, use only doxycycline. Do not use doxycycline during pregnancy.

Analgesia and antipyretics for fever and pain:
- acetaminophen (Tylenol), 325 mg, 1–2 tabs PO q4h prn

**Monitoring and Follow-Up**
- Arrange follow-up in 24–48 hours and again in 7–10 days
- Instruct client to return to clinic if symptoms progress despite therapy
- All sexual partners should be treated for STIs
- Communicate reportable STI diseases
- If culture was positive at the onset, repeat culture post-treatment after one menstrual cycle

**Indications for Admission to Hospital**
- Failure of outpatient therapy
- Nulliparity, especially in women < 20 years of age
- Pregnancy
- Presence of adnexal swelling
- Presence of gastrointestinal symptoms
- Presence of an IUD
- Client appears acutely ill, has signs of peritonitis, severe pain, high fever
- Inability to rule out surgical emergencies as a cause (for example, ectopic pregnancy or appendicitis)
- Unclear diagnosis
- Client intolerant of outpatient therapy (i.e., is vomiting)
- Client unreliable, and noncompliance with therapy and follow-up is anticipated

**Appropriate Consultation**
Consult a physician, as appropriate, for medication orders and to arrange transfer.

**Adjuvant Therapy**
- Bed rest
- Start an IV with normal saline to keep vein open
- Draw blood for culture (3 samples)

**Pharmacologic Interventions**
Consult physician who may prescribe the following IV antibiotics:
- clindamycin 900 mg IV q8h AND gentamicin loading dose of 2 mg/kg of body weight IV/IM followed by a maintenance dose of 1.5 mg/kg of body weight IV/IM q8h
- Parenteral therapy can be stopped 24 hours after a patient is clinically improved and oral therapy with doxycycline should continue for a total of 14 days

For clients with allergy to doxycycline or tetracycline, discuss with physician. Oral clindamycin is sometimes used.

Pregnant women require special consideration: do not give doxycycline. Consult a physician concerning choice of antibiotics.

**Monitoring and Follow-Up**
Monitor vital signs and symptoms frequently.

**Referral**
Medevac as soon as possible.

**SOURCES**

Internet addresses are valid as of June 2010.

**BOOKS AND MONOGRAPHS**


INTERNET GUIDELINES, STATEMENTS AND OTHER DOCUMENTS


JOURNAL ARTICLES


ENDNOTES


6 Blondel-Hill E, Fryters S. (Ed.) Bugs & drugs. Edmonton, AB: Capital Health Authority; 2006.

7 Nystatin monograph. Lexicomp Online. Available at: September 2009 at http://www.utdol.com
8 McAllister J. New HPV vaccine may offer broader defense. Available at: http://www.sogc.org/media/pdf/articles/arthpvvaccine080722.pdf


