

## TABLE OF CONTENTS

### **Section IIA: Gynecologic Services/Health Promotion and Disease Prevention**

1. Amenorrhea
2. Anemia
3. Bacterial Vaginosis
4. Breast Disease
5. Cervical Cytology Screening and Management of Abnormal Cervical Cytology
6. Diabetes Screening
7. Dyslipedemia
8. Dysmenorrhea
9. Ectopic Pregnancy
10. Hypertension
11. Premenstrual Syndrome
12. Postpartum Evaluation and Contraception
13. Substance Abuse
14. Urinary Tract Infection
15. Vulvovaginal Candidiasis

# AMENORRHEA

## I. INTRODUCTION

- A. Clinical problems arise in the management of family planning clients when amenorrhea interferes with or complicates the standard protocols for starting or changing birth control methods.
- B. Any client fulfilling the following criteria should be considered as having the clinical problem of amenorrhea:
  - 1. No bleeding by age 13 in the absence of growth and development of secondary sexual characteristics.
  - 2. No periods by age 15, regardless of the presence of normal growth and development with the appearance of secondary sexual characteristics.
  - 3. No periods 5 years after the initiation of breast development, or pubic or axillary hair development.
  - 4. In a woman who has been menstruating, the absence of periods for a length of time equivalent to a total of at least three of the previous cycle intervals, or six months without menses.

## II. PLAN OF ACTION

- A. The possibility of pregnancy should always be considered and ruled out.
- B. Referral for endocrine evaluation is appropriate for anyone who has not had a menstrual period by age 15, and for any amenorrheic client who has shown no evidence of growth and development of secondary sex characteristics by age 13.
- C. The current menstrual pattern should be compared to the client's usual pattern before pregnancy, hormonal contraception, any medication, significant weight change (15 or more pounds), or significant lifestyle changes.
- D. A historical review and appropriate physical examination should focus on medical conditions, surgical procedures and obstetrical events that might be causing amenorrhea (Appendix).
- E. All current and recent medication and hormonal contraception should be reviewed.
- F. In some cases, with a negative history and physical examination, expectant management is appropriate. The client should be given reassurance and encouraged to await her menstrual period, especially if the duration of amenorrhea is less than 6 months. After 6 months, consider laboratory testing, progestational challenge and/or referral.
- G. When laboratory testing is indicated, a thyroid stimulating hormone level (TSH) and a serum prolactin should be ordered. A client with an abnormal test result should be referred for appropriate evaluation and management.
- F. When appropriate, a progestational challenge may be given by prescribing medroxyprogesterone acetate (Provera™) 10 mg p.o. qd x 7 days to induce withdrawal bleeding within 7-10 days, or medroxyprogesterone acetate

(Provera™)5 mg p.o. qd X 10-12 days depending on the reference consulted. This treatment would be useful for a client who wishes to start hormonal contraception or to have insertion of an IUD. A client who does not respond to a progestational challenge should have a physician consultation.

- G. If the resumption of hormonal contraception is desired after a brief lapse in hormonal contraception, pregnancy must be ruled out. This may be accomplished by getting a negative urine pregnancy test before and after a two-week interval of abstinence or the use of reliable barrier contraception.
- H. In clients with polycystic ovary syndrome, oral contraceptives, patches and vaginal rings with low androgenicity can decrease hirsutism and acne, prevent unopposed endometrial proliferation, and provide contraceptive protection. DMPA can prevent endometrial proliferation and reduce pregnancy risks.
- I. An amenorrheic client with galactorrhea which is remote from pregnancy and not related to any current medication or hormonal contraception should be referred for physician consultation (Appendix).
- J. Prompt referral for physician evaluation is indicated when amenorrhea is associated with other significant symptoms such as headache, nausea, vomiting, visual or auditory changes, and galactorrhea.

#### REFERENCES

1. Hatcher RA et al. Contraceptive Technology. 19th Revised Edition. Ardent Media, Inc., New York, 2007.
2. Schuiling, K., Likis, F., Women's Gynecologic Health., Jones and Bartlett, Sudbury, MA, 2006.
3. Ziemann M , Hatcher RA, et al. A Pocket Guide to Managing Contraception. Bridging the Gap Foundation, Tiger, GA, 2007

APPENDIX

**AMENORRHEA: DIFFERENTIAL DIAGNOSIS**

<b>HISTORICAL DATA</b>	<b>PHYSICAL FINDINGS</b>	<b>CONSIDERATIONS</b>
Pulmonary tuberculosis, type 1 diabetes mellitus, renal disease, rheumatic heart disease, rheumatoid arthritis, abnormal hematocrit, hemoglobinopathies, cirrhosis, alcohol abuse, anorexia nervosa	Specific to each	Chronic medical conditions may cause amenorrhea
Client takes Dilantin, digitalis, reserpine, cytotoxic medications, some antibiotics	Specific to each	These medications may cause amenorrhea
Client takes phenothiazines, tricyclics, other tranquilizers, antihypertensives, or antidepressive agents	Leaking fluid from breasts	These medications may cause galactorrhea
Headache, nausea, vomiting	Changes in visual fields or acuity, changes in auditory acuity, galactorrhea	Space-occupying pituitary lesion
Prolonged postpartum lactation	Atrophy of uterus, galactorrhea	Chiari-Frommel syndrome
Necrotic process of adenohypophysis	Cachexia, loss of secondary sex characteristics, lowering of basal metabolic rate	Simmonds' disease
Severe postpartum hemorrhage causing collapse of blood supply to pituitary. Initial weight gain postpartum, then weight loss	Panhypopituitarism: loss of secondary sex characteristics, intolerance of cold, breast vulvar, and uterine atrophy	Sheehan's syndrome
Oral contraceptive pills discontinued with no menses for six months: irregular menses prior to oral contraceptives	Nonspecific	Hypothalamic oversuppression

APPENDIX – Continued

HISTORICAL DATA	PHYSICAL FINDINGS	CONSIDERATIONS
Appetite changes, strenuous regular exercise, high stress level	Cachexia, weight loss or weight gain, diminished body fat	Reversible hypogonadotropic functional amenorrhea
Toxic substance exposure, radiation exposure	Specific to each	Damage to ovaries, hypothalamus, endometrium
Oligomenorrhea, hypomenorrhea and subsequent amenorrhea, cold intolerance	Subnormal temperature, drowsy appearance, apathetic, slow speech, recent weight gain, sluggish or delayed reflexes, puffy facies, pretibial edema (myxedema), hair thinned, eyebrows thinned, dry skin, possible enlarged thyroid	Primary hypothyroidism
Oligomenorrhea, irregular cycles precede amenorrhea, weight loss, weakness, increased appetite, heat intolerance, nervousness	Exophthalmos, stare, lid lag, pretibial lesions and myxedema, palpitations, resting tachycardia, onycholysis, excessive sweating, warm moist skin, temporal alopecia, possible enlarged thyroid	Hyperthyroidism, Graves' disease
Amenorrhea	Obesity of trunk, "buffalo hump", moon facies, osteoporosis, hirsutism, acne, purple striae on trunk, hypertension, glucosuria, red cheeks	Cushing's disease
Amenorrhea	Uterine and breast tissue atrophy, clitorimegaly, deepening voice, temporal baldness, hirsutism, male habitus, acne, increased sebum secretion, male body and pubic hair distribution	Virilizing ovarian tumor

APPENDIX – Continued

HISTORICAL DATA	PHYSICAL FINDINGS	CONSIDERATIONS
Amenorrhea	All of the above associated with virilizing ovarian tumor, plus hypertension, and alterations in glucose metabolism and metabolites	Virilizing adrenal tumor
Irregular bleeding alternating with amenorrhea	Breast size increasing	Feminizing ovarian tumor
Irregular menses beginning with first few years after menarche	Hirsutism, obesity, subfertility	Polycystic ovary syndrome: Persistent anovulation, and hyperandrogenism
Recent or chronic pelvic infection or surgery on ovaries	Specific to each	Tubo-ovarian abscess
Mumps as an adult	Hypoestrogenic	Mumps oophoritis
Gradual cessation of menses, “hot flashes”	Age near 50, vagina, uterus, ovaries atrophic changes, dry vaginal mucosa, elevated serum gonadotropins (FSH, LH)	Menopause vs. ovarian pathology
No menstrual flow in adolescent, denies monthly discomfort in abdomen that could indicate menstruation	Secondary sex characteristics and reproductive structures seem present and patent	Hematocolpos, hematometra, congenital disorders, imperforate hymen, obstructed or deformed cervical os, transverse vaginal septum
No menses since vigorous D&C		Asherman’s syndrome

# ANEMIA

## I. INTRODUCTION

Anemia is defined as a reduction in either the percentage of red blood cells (hematocrit), or a reduction in the concentration of hemoglobin in a sample of venous blood when compared with reference values.

## II. CLIENT SELECTION

Iron deficiency is the most common anemia in the general population. The prevalence of iron deficiency is about 2% in males and 12% in women of reproductive age. Black and Hispanic women are at high risk for iron deficiency (~20%). This type of deficiency can result from blood loss or inadequate dietary intake of iron. Iron deficiency occurs when body iron stores become inadequate for red blood cell production. Women are particularly at risk due to iron losses during pregnancy and menstruation. Hormonal contraceptives that reduce menstrual bleeding are beneficial to women who have a tendency toward iron deficiency.

## III. MEDICAL EVALUATION AND SCREENING

The first laboratory evidence of iron deficiency is a low serum ferritin. A value less than 30 micrograms per liter nearly always indicates absent iron stores and is a highly reliable indicator of iron deficiency. The serum iron binding capacity rises, and the serum iron values fall (Appendix A).

To make the diagnosis of iron deficiency anemia, one can either demonstrate an iron-deficient state or evaluate the response to a therapeutic trial of iron replacement. For women of reproductive age, a therapeutic trial of oral iron therapy is the recommended initial approach.

## IV. PLAN OF ACTION

- A. Clients who attend family planning clinics should have hemoglobin and/or hematocrit studies done under the following circumstances:
  - 1. At the initial comprehensive visit if there are signs or symptoms of anemia or at the provider's discretion if a woman is from a group at high risk for anemia such as poor nutritional status, menorrhagia, GI inflammatory disorders
  - 2. When presenting with a history, signs or symptoms of anemia
  - 3. If required for the provision of a contraceptive method
- B. In general, a hemoglobin concentration less than 11 g/dL or a hematocrit less than 33% should prompt further evaluation: on-site or by referral, which includes a complete blood count (CBC), red blood cell indices and reticulocyte count.

- C. Appropriate treatment for iron deficiency anemia is a daily dose of 60-180 mg of oral elemental iron: in the form of ferrous sulfate, ferrous gluconate, or ferrous fumarate).
- D. Nutrition counseling and an iron-rich food list should be provided (Appendix B). Iron from meat, poultry or fish is absorbed more efficiently than iron from plant sources. Foods containing vitamin C (see Appendix B) also enhance iron absorption from plant sources when eaten at the same meal. Coffee, tea, colas, whole grains, legumes, dairy products and calcium pills decrease the amount of iron from plant sources absorbed at each meal.
- E. A client with a hemoglobin concentration less than 10 g/dL or a hematocrit less than 30% should be referred to a physician for consultation. Additional testing might include serum ferritin, serum iron and total iron-binding capacity.
- F. An unusually high hematocrit may be due to smoking, dehydration, or stress polycythemia. If the hematocrit is greater than 49%, polycythemia vera should be considered because combined hormonal contraceptives are contraindicated in this rare disease. Medical consultation should be obtained.
- G. Any hormonal contraceptive may be used to decrease menstrual blood loss when excessive menstrual flow is a contributing factor for anemia.

#### V. FOLLOW-UP

- A. An increase in the number of reticulocytes is the first sign of improvement after commencement of iron therapy. A reticulocyte value of 5 -10% may be achieved within 2 - 4 weeks, but iron therapy should be continued for an additional 3 – 6 month to replenish iron stores.
- B. Adequate response to supplementation is a return of the hematocrit level half way toward normal within 3 weeks, with full return to baseline after 2 months.
- C. If the client shows no improvement with iron therapy, refer her for physician consultation.
- D. If heavy menstruation appears to be the cause of persistent anemia, an appropriate change in contraceptive method should be considered and referral for gynecologic evaluation, if indicated.

#### REFERENCES

1. Hatcher RA et al. Contraceptive Technology. 19th Revised Edition. Ardent Media, Inc., New York, 2007
2. Ziemann M , Hatcher RA, et al. A Pocket Guide to Managing Contraception. Bridging the Gap Foundation, Tiger, GA, 2010
3. CDC, Iron Deficiency—United States, 1999-2000, MMWR October 11, 2002, 51 (40):897-899.

## APPENDIX A

### RELATIONSHIPS BETWEEN IRON STORES AND IRON STUDIES

---

Progression to Anemia	Iron Studies to Determine Progression
Iron store deficiency ↓	Normal erythropoiesis Decreased serum ferritin (<15 mcg/L)*
Absent stores with Iron-deficient erythropoiesis ↓	Decreased serum iron (<60 mcg/dL); increased TIBC (>360 mcg/dL) Decreased transferrin saturation (<15% typical)  Microcytosis/hypochromia
Anemia	Decreased hematocrit/increased RDW Transferrin saturation of <10% Severe erythrocyte changes

---

Abbreviations: RDW indicates erythrocyte distribution width; TIBC, total iron-binding capacity.

\*For postmenopausal women <20 mcg/L is diagnostic. In patients with chronic disease states, the ferritin concentration may rise, but a value of <50 mcg/L is still consistent with iron deficiency and a value of >100 mcg/L excludes it. Iron studies are normal in patients with thalassemia traits  $\alpha$  and  $\beta$ .

## APPENDIX B

### IRON AND VITAMIN C FOOD LIST

Vitamin C-rich foods eaten in the same meal with an iron-rich food will help your body to use the iron.

#### IRON SOURCES

	<b>Animal Sources</b>	<b>Plants Sources</b>
Excellent	Oysters Liver Kidney	Iron fortified cereals
Very Good	Red meats Turkey Liverwurst	Dried beans Blackstrap molasses
Good	Chicken Crab	Canned plums Apricots, dried Greens (spinach, beets, chard) Enriched breads or pasta Peas
Fair	Egg yolk	Tomato juice, Nuts, Peanut Butter Raisins, Dates, Figs Brussels sprouts, Watermelon

#### VITAMIN C-RICH FOODS

<b>Best Sources</b>	<b>Good Sources</b>
Broccoli	Cabbage
Brussels sprouts	Cauliflower
Cantaloupe	Collard greens
Grapefruit	Greens, beet or turnip
Grapefruit juice	Potato
Orange	Rutabaga
Orange juice	Spinach
Peppers, red or green	Tangelo or tangerine
Strawberries	Tomato, raw or cooked
	Tomato juice
	V-8 juice

## Bacterial Vaginosis (BV)

### I. INTRODUCTION

Bacterial Vaginosis (BV) is a polymicrobial clinical syndrome. BV is the most prevalent cause of malodorous vaginal discharge. Although BV is associated with having multiple sex partners or a new sex partner, women who have never been sexually active can also be affected. Treatment of male sex partners has not been beneficial in preventing the recurrence. Douching, and lack of vaginal lactobacilli is also associated with BV.

### II. HISTORY AND EVALUATION

- A. History may include:
  - 1. Recent change in sexual partner
  - 2. Partner symptoms of STIs
  - 3. Multiple partners
  - 4. Lack of STI protection (lack of condom use)
- B. Symptoms may include:
  - 1. Abnormal vaginal discharge: foul “fishy” odor that intensifies after intercourse
  - 2. Vulvar/vaginal pruritis, burning, irritation
- C. Physical exam findings:
  - 1. Vulvar inflammation
  - 2. Homogeneous, thin, white discharge that smoothly coats vaginal walls
  - 3. Amine odor

### III. DIAGNOSIS

Clinical criteria can be used to make diagnosis and require three of the following symptoms or signs:

- A. Homogeneous, thin, white discharge that smoothly coats the vaginal walls
- B. “Clue cells” on microscope exam
- C. Positive “whiff” test when discharge is mixed with 10% KOH
- D. pH of vaginal fluid >4.5

Note: Pap screening tests have no clinical utility for the diagnosis of BV

### IV. TREATMENT

Provide treatment if client has above signs or symptoms following the most recent CDC STD Treatment Guidelines found at:

<http://www.cdc.gov/std/treatment/default.htm>

## V. SPECIAL TREATMENT CONSIDERATIONS

- A. Allergy or intolerance to the recommended therapy:  
Intravaginal clindamycin cream is preferred in case of allergy/intolerance to metronidazole or tinidazole. Intravaginal metronidazole gel can be considered for women who do not tolerate systemic metronidazole. Intravaginal metronidazole should **NOT** be administered to women allergic to metronidazole.
- B. Infection in pregnancy: All pregnant women who have symptomatic disease require treatment due to association of adverse pregnancy outcomes including premature rupture of membranes, preterm birth, intra-amniotic infection, and postpartum endometritis.

## VII. CLIENT EDUCATION/COUNSELING

- A. Avoid alcohol during treatment with Metronidazole and Tinidazole for 24 hours after completion: interaction may produce symptoms including abdominal cramps and vomiting.
- B. Clindamycin cream (oil based) may weaken latex condoms and diaphragms for 5 days after treatment
- C. Sexual partner treatment is not recommended
- D. Provide the client with a copy of the site medication information sheet
- E. Provide STI education information
- F. Discourage douching: does not treat or relieve symptoms
- G. Provide current educational information on Bacterial Vaginosis
- H. Provide contraceptive information
- I. Encourage correct and consistent condom use to prevent STIs

## VIII. FOLLOW-UP

- A. Unnecessary if symptoms resolve after medication treatment
- B. If symptoms continue, client needs to be seen

## IX. REFERRAL/REPORTING

- A. Clients with multiple recurrences: refer to GYN specialist
- B. Clients who are pregnant: refer to prenatal care
- C. Mandated state reporting is **not** required

## REFERENCES

1. CDC: Sexually Transmitted Disease Treatment Guidelines, 2010.
2. DHMH Infectious Disease and Environmental Health Administration: Diseases, Conditions, Outbreaks, & Unusual Manifestations Reportable by Maryland Health Care Providers <http://ideha.dhmh.maryland.gov/what-to-report.aspx>
3. Hatcher RA et al. Contraceptive Technology. 19th Revised Edition. Ardent Media, Inc., New York, 2007

## BREAST DISEASE

### I. INTRODUCTION

Fear of breast cancer motivates women with breast symptoms and concerns to consult their medical provider. It has been estimated 1 in 4 women in the United States will require medical attention for breast problems, most of which are benign – such as symptomatic fibrocystic changes, mastodynia, nipple discharge and fibroadenoma. The National Cancer Institute of the National Institute of Health currently estimates 12.2% as the lifetime risk of developing breast cancer.

Fibrocystic disease, the most common benign condition of the breast, occurs in 10% of women under age 21 and becomes more common in the premenopausal period. Common symptoms are bilateral pain and tenderness especially in the upper outer quadrants of the breasts, which increase during the premenstrual phase of the cycle. Examination reveals a generalized lumpiness or granular feeling especially in the upper outer quadrants and beneath the nipple-areola complex. Oral contraceptives and depot medroxyprogesterone acetate have been shown to be helpful in suppressing symptoms of fibrocystic changes.

Nipple discharge may be spontaneous or provoked. Milky discharge in a non-lactating breast may be associated with hypothyroidism, a prolactin-secreting tumor or the administration of certain medications including hormonal contraceptives and chlorpromazine type drugs. Unilateral, spontaneous serous or serosanguinous discharge from a single duct is usually caused by intraductal papilloma, rarely cancer. In premenopausal women, spontaneous multiple duct discharge, unilateral or bilateral, is often due to fibrocystic change and may be green or brownish in color.

An American woman now has a 1 in 8 chance of developing breast cancer before she reaches age 85. A woman with a family history of a mother or sister having breast cancer is more likely to develop the disease. The risk is increased when the breast cancer occurred before menopause, was bilateral, or was present in 2 or more first degree relatives. However, in over 90% of the women with the disease there is no history of breast cancer among female relatives. The association between an increased risk of breast cancer and hormonal contraception is unclear.

### II. SCREENING

While mammography is the most effective screening method for detecting non-palpable breast cancers, clinical breast exam (CBE) is also important. The long standing recommendation that all adult women practice monthly breast self examination (BSE) is now being questioned. Recent studies have shown breast cancer survival is no greater in women who practice BSE than those who do not. Despite the recent controversy, approximately 90% of breast masses are discovered by the woman and therefore BSE is still recommended by the majority of practitioners. ACOG recommends OB-GYNS should continue to

counsel women that BSE has the potential to detect palpable breast cancer and should not discourage women from performing BSE.

In 2009, the US Preventative Task Force (USPTF) issued revised mammogram guidelines. Those guidelines stated screening mammograms should be done every 2 years beginning at age 50 for women at average risk of breast cancer and screening mammograms before age 50 should not be done routinely and decision for mammogram at this age be based on a woman's values regarding the risks and benefits of mammography. The USPTF also stated doctors should not teach women to do breast self-exams.

The American Cancer Society (ACS) and current ACOG guidelines differ from the USPTF's recommendations. ACOG continues to recommend women age 40 - 49 have mammography every 1 - 2 years and yearly beginning at age 50. Women ages 35 and older with a strong family history of breast cancer (in a first-degree relative diagnosed prior to menopause), should have an annual mammogram. ACOG continues to recommend that all women, along with their physicians, should individually assess the benefits as well as the risks of mammography screening.

### III. PLAN OF ACTION

- A. Routine breast screening
  1. CBE should be performed at each annual exam.
  2. During the CBE, the client can be instructed in performing a BSE a few days after the cessation of each menstruation or on a monthly calendar day for women who are not menstruating.
  3. Screening mammography should be ordered according to current ACOG guidelines as described under "Screening".
- B. Evaluation of breast disease is based on risk factors, age history, and physical examination. History should include: the duration and onset of signs and symptoms, menstrual and reproductive history, hormone use and dietary habits. Factors that increase the risk of breast cancer should be considered (Appendix A).
- C. Management of fibrocystic disease may include:
  1. Restriction of caffeine
  2. Avoidance of vigorous exercise during the times of most discomfort.
  3. Wearing a bra with good support.
  4. Taking Vitamin E, 400 IU p.o. bid.
  5. Using the lowest amount of estrogen in oral contraceptives.
  6. Using diuretic therapy or analgesics as necessary.
- D. Diagnostic evaluation for nipple discharge includes:
  1. Cytology of the discharge and referral to a surgeon if abnormal.
  2. A prolactin level done 24 or more hours after the breast examination and instruction not to manipulate the breast until blood is drawn. If the result is abnormal, refer the client to an endocrinologist.
  3. A thyroid profile, and if abnormal, referral for medical evaluation.
  4. A pregnancy test.
- E. Patient presents with palpable breast mass:

1. A client who presents with palpable breast should be referred immediately for evaluation by a breast specialist. Diagnostic imaging and/or biopsy may be ordered as needed to facilitate the referral and expedite care.
  2. The only exception to the requirement for immediate referral is for low-risk women under age 30 with a single palpable mass. In these women, clinicians may consider evaluation following next menses. If mass(es) persist after next menses, referral for further examination with fine-needle aspiration, ultrasound and/or biopsy is indicated. Mammography may be necessary, but is often of limited usefulness in this age group.
- F. Be familiar with the indicators for breast disease requiring referral (Appendix B).
- G. For breast cancer prevention, all women should be encouraged to follow a healthy diet, control weight, exercise regularly and avoid overindulgence in alcoholic beverages.

#### IV. FOLLOW-UP

- A. Follow-up should be scheduled as appropriate to review client status, laboratory test results and treatment responses.
- B. If a client expresses concern regarding nipple discharge and the diagnostic evaluation is negative, consider discontinuing hormonal contraception and offering alternative methods of birth control.
- C. The referring clinic should follow up on all surgical consultations to insure they have been carried out (Appendix C).

#### REFERENCES

1. ACOG. *Precis: Primary and Preventive Care*. 3rd Ed., 2004
2. ACOG. *Precis: Gynecology*. 2nd Ed., 2001
3. Hatcher RA et al. *Contraceptive Technology*. 19th Revised Edition. Ardent Media, Inc., New York, 2007
4. Tierney LM Jr. et al. *Current Medical Diagnosis and Treatment*. 44rd Ed., McGraw-Hill, New York, 2005

## APPENDIX A

### FACTORS THAT INCREASE THE RISK OF BREAST CANCER

1. Increased age
2. Previous history of breast cancer
3. Nulliparity
4. Delayed childbearing (after age 30)
5. Early menarche (before age 12)
6. Late menopause (after age 53)
7. Family history of breast cancer (first degree relative)
8. Biopsy-proven ductal or lobular hyperplasia, particularly atypia
9. Higher socioeconomic status
10. Obesity
11. Moderate to high alcohol intake (2 to 5 drinks per day)
12. Genetics: BRCA1 or BRCA2 mutation

## APPENDIX B

### INDICATIONS FOR REFERRAL

1. Dominant mass
2. Marked increase in size or firmness of one breast
3. Retraction of the nipple or the skin
4. Redness and edema over at least a third of the breast with underlying induration
5. Bloody nipple discharge
6. Changes in nipple epithelium, such as erosion
7. Mammographic evidence of breast disease
8. Genetic counseling/ testing may be considered for clients with a strong family history

## APPENDIX C

### **RECOMMENDED STEPS WHEN REFERRING FOR POSSIBLE BREAST LESION**

1. Advise the client of the need for a surgical consultation and give her the name(s) of a surgeon. Provide the full name, address, and telephone number of the surgeon.
2. Complete a clinic referral form for the client and attach a duplicate copy for the client's record.
3. Give the client the referral to take to the surgeon, and request that the form be returned to the clinic after the surgeon has completed the evaluation and provided a note for the clinic record.
4. Give the client an appointment for a family planning visit within 6 weeks of referral.

# CERVICAL CYTOLOGY SCREENING AND MANAGEMENT OF ABNORMAL CERVICAL CYTOLOGY

## I. INTRODUCTION

The Maryland Department Health and Mental Hygiene's Family Planning and Reproductive Health Program requires all delegate agencies to initiate cervical cytology screening protocols that are consistent with current national professional organization standards. Delegate agencies site Medical Directors s must ensure providers follow guidelines issued by the American College of Obstetrics and Gynecology (ACOG),

For the follow-up of abnormal cervical cytology results, the Family Planning and Reproductive Health Program requires that delegate agencies follow the American Society for Colposcopy and Cervical Pathology's (ASCCP) 2006 Consensus Guidelines for the Management of Women with Abnormal Cervical Cancer Screening Tests and 2006 Consensus Guidelines for the Management of Women with Cervical Intraepithelial Neoplasia or Adenocarcinoma in Situ. ASCCP Guidelines are referenced in this document and may be found at <http://www.asccp.org>.

## II. CERVICAL CYTOLOGY SCREENING RECOMMENDATIONS

### A. General screening recommendations:

1. Pap test and speculum exam should be used for routine cervical cancer screening.
2. Pelvic exam (speculum and bimanual) should be performed at the same time as the Pap test and is only needed every two years (unless medically indicated more frequently)
3. The need for cervical cytology cancer screening should not be the only basis for the onset of gynecological care.
4. Testing for cervical cancer is performed using either Liquid-Based Cytology or Conventional (slide) Pap Test.
5. In the absence of endocervical cells, if a Pap smear is satisfactory and negative, then regular screening should be continued.
6. For Chlamydia STI screening and testing (when a pelvic exam is not indicated) CDC guidelines recommends the use of urine testing or vaginal self swab instead of a pelvic exam and endocervical sample, if available.

### B. Age-based screening recommendations:

1. Pelvic exams (speculum and bimanual) on females 13-20 years of age are no longer required unless medically indicated (i.e., symptoms or conditions related to sexually transmitted disease, vaginitis, abnormal vaginal bleeding, amenorrhea, pelvic pain, foreign body or pelvic mass).
2. Screening for cervical cancer should begin at age 21
3. For the purpose of these guidelines an ADOLESCENT is defined as an individual 20 years of age or younger.
4. Adolescents must be able to obtain appropriate preventative health care, including, but not limited to, an assessment of health risks, counseling for

- pregnancy and sexually transmitted infection (STI) prevention, contraception, and treatment of STI's; even if they do not need a Pap smear.
5. Adolescents and young women who have received the HPV vaccine should continue cervical cancer screening according to the current recommendations.
  6. Clinical breast exam should begin at age 21 and be performed at least every 3 years until age 40, and then should occur annually

C. ACOG Recommendations for Cervical Cancer Screening:

Age to Begin	Screening Exam	Screening Interval
Age 21-29	Conventional Pap Test OR Liquid Based Cytology (LBC)	Every two years
Age $\geq$ 30* with three consecutive, negative cytology results	Conventional Pap Test OR Liquid Based Cytology	Every two to three years.  Frequency should be individualized using clinical judgment

\* High-Risk Human Papillomavirus testing as an adjunct to cervical cytology testing may be used for cervical cancer screening in women 30 years of age or older. If both tests are negative, testing then occurs every three years. For abnormal results, follow-up guidelines may be found on <http://www.asccp.org>. However, HR-HPV is not a funded Title X family planning test.

Of note is that the USPTF has recently released new guidelines that recommend that for women ages 30 to 65 years who want to lengthen the screening interval, screening with a combination of cytology and human papillomavirus (HPV) testing can be performed every 5 years instead of every two to three years. For now, the DHMH Family Planning Program recommends following the ACOG guidelines.

D. Contraindications for Pap Screening:

Visible cervical mass with bleeding

E. Conditions that may increase risk of inadequate sample:

1. Heavy menstrual bleeding. To improve quality of sample, the cervix can be lightly wiped with a cotton swab stick. The use of liquid-based cytology greatly decreases the risk of a specimen being obscured by blood.
2. Women less than 6-8 weeks post-partum (vaginal delivery) or 6-8 weeks post-abortion. If appropriate, post-partum/post-abortion pap smears should be conducted at 6 weeks post-partum/post-abortion, but if necessary, can be done earlier with the knowledge that inflammatory results are more common in a postpartum pap smear done at less than 6-8 weeks postpartum. Post partum status should not be a reason to delay follow-up of abnormal on abnormal cervical cancer screening.

NOTE: Pap testing should not be deferred if vaginal discharge or signs and symptoms of vaginal infection are present.

### III. CLIENT INFORMATION/EDUCATION

- A. Regular cervical cancer screening (Pap test) is viewed as an important component of routine preventive care. Screening (via patient history) and testing for sexually transmitted infections, if indicated, should occur at the annual visit even if cervical cancer screening (Pap test) is not done.
- B. Discuss the importance of cervical cancer screening which includes:
  - 1. Frequency of cervical cancer screening is based on recommendations from a nationally recognized professional organization, a woman's age and her Pap test history.
  - 2. Cervical cancer screening test is a Pap test. (Frequency of Pap testing is dependent on previous Pap test results).
  - 3. Possible testing for HPV and STI.
- C. Discuss limitations of screening procedures
  - 1. Normal results on a screening exam do not necessarily indicate absence of disease.
  - 2. No screening test is 100% accurate; therefore, some cases of the disease may be unavoidably missed.
  - 3. Normal results never rule out the later development of the disease, which is why regular screening is so strongly recommended.
  - 4. The detection of an abnormality does not mean the abnormality is cancerous. Only some women with abnormal screening results will, after further evaluation, be diagnosed with disease.

### IV. MANAGEMENT OF WOMEN WITH SPECIAL CONDITIONS

- A. Special Considerations:
  - 1. Women with a histologically-confirmed HSIL, whether or not they receive treatment - continue cervical cancer screening on a regular basis, for 20 years.
  - 2. Women who are HIV+, immunocompromised, or had *in utero* DES exposure – should have ANNUAL cervical cancer screening regardless of the testing method.
  - 3. For women whose cytology exam is satisfactory but obscured or partially obscured by inflammation – repeat the Pap test in 12 months.
  - 4. If pap results are normal, but no endocervical component is identified, pap can be repeated in 12 months if woman does not have a history of abnormal pap smear, HR-HPV, or immunosuppression.
  - 5. Repeat the Pap test in 6 months if the client has any of the following
    - a. History of an abnormal Pap (atypical squamous cells of undetermined significance or worse) without 3 subsequent negative Pap test.
    - b. Previous Pap with unexplained glandular abnormality
    - c. History of a positive High-Risk HPV test within the past year
    - d. Is immunosuppressed
    - e. Similar obscuring factor in previous Pap test
    - f. Has not had a Pap test at least every two years

- g. Clinician's inability to clearly visualize the cervix or sample the endocervical canal
- 6. Women whose cytology exam is unsatisfactory need a repeat cytology exam within the next 2 to 4 months.
- 7. Per the ASCCP guidelines, adolescents and pregnant women are also given special consideration. See guidelines for details at <http://www.asccp.org>
- 8. Endocervical curettage is contraindicated in pregnant women
- 9. Colposcopy may be deferred until the postpartum examination
- 10. Invasive cancer is the only indication for treatment during pregnancy
- B. Provision of Screening and Diagnostic Services for Family Planning Women with Abnormal Pap Tests
  - 1. Women <40 years of age seen in a delegate agency family planning clinic site who have an abnormal Pap test result requiring follow-up for the abnormality can be referred to the Maryland Breast and Cervical Cancer Diagnosis and Treatment Program for diagnostic a treatment services if they meet the program eligibility criteria. For more information about the program eligibility requirements visit the Breast and Cervical Cancer Diagnosis and Treatment (BCCDT) Program website at [http://fha.maryland.gov/cancer/bccdt\\_home.cfm](http://fha.maryland.gov/cancer/bccdt_home.cfm) or call 410-767-6787 or 1-
  - 2. HPV testing should be discussed and recommended to the client.

## V. MANAGEMENT OF ABNORMAL CERVICAL CYTOLOGY RESULTS

- A. Follow-up Process for Abnormal Pap Test Results must be established:
  - 1. Delegate agencies must develop and implement a tracking system that will notify women of cervical screening results and follow-up diagnostic testing that is required.
  - 2. A method of contacting women without violating their confidentiality must be established at the first visit.
  - 3. All women with an abnormal pap must be notified within 2 weeks of obtaining the Pap test.
  - 4. If the pap results are HSIL, AGC, Squamous CC, or AIS, a regular letter and a certified letter should be sent to the client.
  - 5. Documentation must be maintained in the medical record of all phone calls and letters to clients.
  - 6. Colposcopy should be completed within 90 days of performing the pap test, therefore it is recommended that follow-up be initiated as quickly as possible.
  - 7. High Risk Type-HPV testing is for follow-up of ASC-US pap ONLY and is used to determine management for either referral for colposcopy or return to annual screening.
- B. Clinical Management of Pap Testing Results
  - 1. ABNORMAL pelvic examination (abnormal gross appearance of cervix), NORMAL Pap test
    - a. Notify the patient of the results of her pelvic examination and its implication. This information should include:
      - i. The nature of the suspected disease and differentiation between a cervical lesion or other pelvic abnormality (ovarian mass) and implications for coverage by BCCDTP, etc.

- ii. Refer immediately for colposcopy with biopsy as indicated. Do not rely on cervical cytology results alone.
  - b. Notify the patient's primary provider (if any).
    - i. The physical exam findings and screening test results
    - ii. BCCDTP role/action taken
- 2. UNSATISFACTORY cervical cytology specimen
  - a. A pap smear is considered unsatisfactory if it does not have adequate squamous cellularity, is not preserved and/or fixated correctly, or if there are significant obscuring elements such as blood or inflammatory elements.
  - b. If pap is unsatisfactory, repeat Pap smear in 2-4 months. If second Pap test is unsatisfactory, refer for colposcopy.
- 3. NO ENDOCERVICAL COMPONENT: If woman does **not** have a history of abnormal pap smear, HR-HPV, or immunosuppression, then pap can be repeated in 12 months.
- 4. ABNORMAL cervical cytology report
  - a. Notify the patient of the results of the Pap test and its implications as soon as possible but within 6 weeks of receipt of abnormal findings, including:
    - i. The nature of the suspected disease
    - ii. What a precancerous lesion is and that it is 100% curable
    - iii. The need for further testing for definitive diagnosis before treatment
    - iv. Treatment options available, benefits and risks of each
  - b. Refer/arrange for repeat Pap test and/or diagnostic work-up and treatment based on Pap test results.

#### VI. FOLLOW-UP OF ABNORMAL CYTOLOGY RESULTS

- A. The website <http://www.asccp.org> contains algorithms for:
  - 1. Follow-up of ASC-US cytology results for all women
  - 2. Management of adolescent women with HSIL results, ASC-US or LSIL cytology
  - 3. Management of pregnant women with LSIL results
  - 4. Management of HSIL, ASC-H and LSIL cytology for all women
  - 5. Management and follow-up of AGC cytology.
- B. A diagnostic excisional procedure is recommended for women with HSIL and an unsatisfactory colposcopy (squamocolumnar junction is not seen or limits of identified lesion cannot be indentified), except when pregnant.
- C. A diagnostic excisional procedure is recommended for adolescents and young women with HSIL when CIN of any grade is identified on ECC.

#### VII. ADDITIONAL INFORMATION

Indications for Referral to a Qualified Colposcopist:

- A. Women age 20 and under requiring treatment for CIN2/3 (if using the ACS screening recommendations).
- B. Pregnant women with HSIL cytology.
- C. Women with a significant cervical lesion in which "see and treat" may be indicated.
- D. Women desiring fertility who, after excisional treatment, have recurrent or persistent cervical dysplasia.
- E. Women who have had two "unsatisfactory for evaluation" tests 2-4 months apart.
- F. Women with AGC (Abnormal Glandular Cells) or AIS (Adenocarcinoma in situ) on

cytology. Management follows the algorithm found at <http://www.asccp.org>.  
G. Women with any gynecologic cancer should be referred to a Gynecologic Oncologist.

## REFERENCE

1. American College of Obstetricians and Gynecologists--Obstetrics & Gynecology, Practice Bulletin #109 "Cervical Cytology Screening". December, 2009

## LISTING OF ASCCP ALGORITHMS

To access algorithms, please go to: <http://www.asccp.org>.

- 1) Management of Women with Atypical Squamous Cells of Undetermined Significance (ASC-US)
- 2) Management of Adolescent Women with Either Atypical Squamous Cells of Undetermined Significance (ASC-US) or Low-grade Squamous Intraepithelial Lesion (LSIL)
- 3) Management of Women with Atypical Squamous Cells: Cannot Exclude High-grade SIL (ASC-H)
- 4) Management of Women with Low-grade Squamous Intraepithelial Lesion (LSIL)\*
- 5) Management of Pregnant Women with Low-grade Squamous Intraepithelial Lesion (LSIL)
- 6) Management of Women with High-grade Squamous Intraepithelial Lesion (HSIL)\*
- 7) Management of Adolescent Women (20 Years and Younger) with High-grade Squamous Intraepithelial Lesion (HSIL)
- 8) Initial Workup of Women with Atypical Glandular Cells (AGC)
- 9) Subsequent Management of Women with Atypical Glandular Cells (AGC)
- 10) Use of HPV DNA Testing\* as an Adjunct to Cytology for Cervical Cancer Screening in Women 30 Years and Older
- 11) Management of Women with a Histological Diagnosis of Cervical Intraepithelial Neoplasia Grade <sub>1</sub> (CIN <sub>1</sub>) Preceded by ASC-US or LSIL Cytology
- 12) Management of Women with a Histological Diagnosis of Cervical Intraepithelial Neoplasia – Grade <sub>1</sub> (CIN <sub>1</sub>) Preceded by HSIL or AGC-NOS Cytology
- 13) Management of Adolescent Women (20 Years and Younger) with a Histological Diagnosis of Cervical Intraepithelial Neoplasia – Grade <sub>1</sub> (CIN <sub>1</sub>)
- 14) Management of Women with a Histological Diagnosis of Cervical Intraepithelial Neoplasia (CIN <sub>2,3</sub>)\*
- 15) Management of Adolescent and Young Women with a Histological Diagnosis of Cervical Intraepithelial Neoplasia – Grade <sub>2,3</sub> (CIN <sub>2,3</sub>)
- 16) Management of Women with Adenocarcinoma in-situ (AIS) Diagnosed from a Diagnostic Excisional Procedure

## GLUCOSE SCREENING AND DIABETES MELLITUS

### I. INTRODUCTION

Glucose screening should be offered to clients with historical or clinical risk factors for diabetes mellitus. Contraceptive choices may be affected by evidence of abnormal glucose metabolism.

Risk factors for diabetes mellitus include family history, age 30 or older, history of gestational diabetes, macrosomia, fetal anomalies or fetal death, obesity, hypertension, hyperlipidemia, persistent glucosuria, persistent proteinuria, and recurrent candidiasis.

Screening should be done with a fasting plasma glucose (FPG) measurement. Concentrations of  $<110$  mg/dL are normal and warrant nothing more than repeated measurements at 3-year intervals. Concentrations of  $\geq 126$  mg/dL are consistent with diabetes and should be repeated once to confirm the diagnosis. Concentrations of 110 - 125 mg/dL are abnormal but not diagnostic of diabetes. These individuals are at higher risk for diabetes and cardiovascular disease than are people with normal glucose levels and are considered to have prediabetes (impaired glucose tolerance).

An alternate screening test is a random plasma glucose (RPG) with an abnormal value being  $\geq 200$  mg/dL (Appendix).

Diabetes mellitus occurs in two general forms in nonpregnant adults. Type 1 diabetes (insulin-dependent diabetes; IDDM) is an autoimmune disorder directed at the pancreatic B cells. The disease generally occurs in children and young adults, and the autoimmune B cell destruction leads to a complete lack of endogenous insulin production. Thus, these individuals are “dependent” on exogenous insulin for day-to-day survival; they will develop ketoacidosis if they are not treated with insulin.

Type 2 diabetes (non-insulin-dependent diabetes; NIDDM) encompasses all other forms of chronic hyperglycemia severe enough to meet current diagnostic criteria for diabetes. Individuals with NIDDM have some degree of endogenous insulin production, so that they rarely develop ketoacidosis. They develop hyperglycemia because of an imbalance between the amount of insulin the pancreas can produce and the amount of insulin required to keep blood glucose levels normal.

Changes in blood levels of insulin and glucose with low-dose oral contraceptives are so slight they are of minimal clinical significance. The observed changes in carbohydrate metabolism with oral contraceptives are in the non-diabetic range.

It is acceptable to prescribe combined hormonal contraceptives for women with diabetes mellitus. Such prescriptions should be made only with the concurrence of the physician primarily responsible for managing the diabetes. As there is at

least a theoretical possibility of increasing the risk of thrombosis, such prescriptions are not advisable for women with diabetes age 35 or older.

## II. PLAN OF ACTION

- A. A client who has a first degree relative (parent, sibling or child) with diabetes mellitus should be advised she is potentially at risk to develop this condition. Weight control and exercise should be advised, and an FPG or RPG should be considered.
- B. A client with one or more risk factors for diabetes mellitus should have an FPG or RPG every 3 years.
- C. In the long-term follow-up about 1/2 of people with gestational diabetes will ultimately develop overt diabetes. An FPG should be considered in the puerperium and repeated every 3 years.
- D. An FPG of 126 mg/dL or higher in a nonpregnant woman on 2 or more occasions is considered diagnostic of diabetes. Referral for medical evaluation should be considered when a client's FPG is > 110 mg dL.
- E. Combined hormonal contraceptives can be prescribed for clients with diabetes mellitus:
  - 1. If other forms of contraception are not acceptable.
  - 2. If only low-dose contraceptives are used, preferably with a progestin other than norgestrel.
  - 3. If the client is under age 35 and has no known vascular complications or other risk factors, such as a strong family history or ischemic heart disease. Women with advanced diabetes complicated by nephropathy (proteinuria), retinopathy, neuropathy, or diabetes of more than 20-year duration are not candidates for estrogen-containing methods of contraception.
- F. Progestin-only oral contraceptives, so-called "mini-pills (Micronor®), have minimal effects on carbohydrate metabolism and are less likely to increase the risk of cardiovascular disease than combined oral contraceptives. By comparison, they have a much higher incidence of irregular bleeding and a higher pregnancy rate.
- G. The injectable contraceptive (Depo-Provera®) may be ideal for contraception in women with diabetes. The contraceptive effectiveness is comparable to combined oral contraceptives, there is less likelihood of an increase in the risk of cardiovascular disease, and there is only a slight modification in glucose metabolism with long-term usage.
- H. It is advisable to obtain concurrence of the client's physician before prescribing hormonal contraception.
- I. If a client with diabetes elects to use a diaphragm or other barrier method, she should be educated as to the symptoms and methodology for prompt diagnosis and treatment of a urinary infection. This problem is twice as common among diaphragm users as among women using oral contraceptives. Spermicide use can also increase the risk of bacteriuria with E. Coli perhaps due to an alteration in the vaginal flora.
- J. IUD usage is appropriate and may be the ideal choice of contraception, especially if vascular disease is present.

- K. A client with diabetes is a candidate for preconception counseling. A client who has completed her family is a candidate for tubal ligation.

### III. FOLLOW-UP

Clients with diabetes may be followed on the same schedule as other family planning clients provided they are under ongoing medical supervision. They should be encouraged to discuss contraceptive choices with their medical health care providers.

### REFERENCES

1. Hatcher RA et al. Contraceptive Technology. 19th Revised Edition. Ardent Media, Inc., New York, 2007
2. Hackley, B., Kriebs, J., and Rousseau, M. Primary Care of Women: A guide for midwives and women's health providers. Jones and Bartlett, Sudbury, 2007
3. Ziemann M , Hatcher RA, et al. A Pocket Guide to Managing Contraception. Bridging the Gap Foundation, Tiger, GA, 2007
4. Speroff L, Darney P. A Clinical Guide for Contraception. 4th Ed., Lippincott Williams & Wilkins, Philadelphia, PA, 2004
5. ACOG. Precip: Primary and Preventive Care. 3rd Ed., 2004
6. ACOG. The Use of Hormonal Contraception in Women with Coexisting Medical Conditions. Practice Bulletin #18, July 2000
7. Tierney LM Jr. et al. Current Medical Diagnosis and Treatment. 44th Ed., McGraw-Hill, New York, 2005

## APPENDIX

### DIAGNOSIS OF DIABETES MELLITUS IN NONPREGNANT ADULTS

---

Classification	Normal (mg/dL)	Prediabetes (mg/dL)	Diabetes* (mg/dL)
Random glucose with symptoms of overt hyperglycemia (fatigue, weight loss, thirst, polyuria)			≥200
Fasting plasma glucose <sup>o</sup>	<110	110-125	≥126
2-hour, 75-g glucose tolerance test	<140	141-199	≥200

---

\*Confirm diagnosis with a second fasting plasma glucose level of ≥126 mg/dL

<sup>o</sup>Measured in plasma in a certified clinical laboratory

## DYSLIPIDEMIA

### I. INTRODUCTION

Coronary heart disease (CHD) is the single leading cause of death of women in the United States. Dyslipidemia is a major risk factor for CHD in women. For women at increased risk, elevated low-density lipoprotein (LDL) cholesterol is considered to be the major cause of atherosclerosis and CHD. Research has conclusively demonstrated that lowering cholesterol, especially LDL cholesterol, reduces the risk for CHD.

The cholesterol level in blood plasma is determined partly by genetic make-up and partly by the fat and cholesterol content of the diet. Other factors such as obesity and physical inactivity all contribute to an elevation of cholesterol. Because LDL cholesterol is the primary atherogenic lipoprotein, LDL cholesterol levels are closely correlated with CHD risk over a broad range. A low high-density lipoprotein (HDL) cholesterol level (<40 mg/dL) is also a risk factor. In contrast, a high HDL cholesterol level ( $\geq 60$  mg/dL) is considered to be protective against CHD. Elevated triglycerides also are associated with increased CHD risk.

Along with lipid testing, adults should also be evaluated for the presence of other CHD risk factors including hypertension, cigarette smoking, severe obesity, diabetes mellitus, sedentary lifestyle, and a history of CHD in the client or a family history of premature CHD (before the age of 55 in males and 65 in females).

Intervention is based on the client's cholesterol levels and CHD risk factors. Management of major risk factors for CHD, such as hypertension and hypercholesterolemia, starts with lifestyle changes that emphasize a healthier diet (high in fiber and low in saturated fat), weight control, smoking cessation, and increased physical activity. If the response is inadequate, drug therapy is required.

Estrogens are known to have a desirable effect on lipids by increasing HDL and decreasing LDL. Progestins tend to have the opposite effect. The adverse changes produced by progestins are related to the specific progestin and its dose. A prudent choice, if lipoproteins are a concern, would be to use a low dose of norethindrone or possibly a norgestimate-containing oral contraceptive.

### II. CLIENT SELECTION/ EDUCATION/ MEDICAL SCREENING

- A. Family planning clients with two or more CHD risk factors (Appendix A) or age 45 or older should be referred for serum cholesterol screening. This test can be performed any time of the day in the nonfasting state. A lipid profile specimen should be obtained in the fasting state.
  - 1. Positive predictors
    - a. Female: Age more than 55 years

- b. Premature menopause
  - c. Cigarette smoking
  - d. Hypertension (blood pressure >140/90 mm Hg)
  - e. Diabetes mellitus
  - f. High-density lipoprotein cholesterol less than 35 mg/dL
  - g. Family history of myocardial infarction or sudden death before age 50 years in a first-degree male relative, or age 60 years in a first-degree female relative
2. Negative risk factor (protective): High-density lipoprotein cholesterol of more than 60 mg/dL (also allows subtraction of one risk factor)
  3. Modifiable changes to reduce coronary artery disease
    - a. Lose weight if obese
    - b. Discontinue cigarette smoking if present
    - c. Control diabetes mellitus if present
    - d. Initiate exercise program
    - e. Control hypertension
    - f. Follow a low-fat and high-fiber diet
    - g. Moderate alcohol use (two or fewer drinks per day)
- B. Appropriate clients should receive information regarding risk factors for CHD (Appendix A). These clients should also be counseled on the health benefits attained from instituting lifestyle changes such as quitting smoking, reducing obesity, and initiating an exercise program. Dietary interventions such as a diet high in fiber and low in saturated fat should also be encouraged.
- C. Clients with no CHD risk factors should be advised that their normal serum cholesterol values (<200 mg/dL) should be periodically reevaluated. Every 5 years is a reasonable interval for this evaluation.
- D. CHD risk classifications based on total cholesterol and triglyceride levels should be assessed:
1. Health professional reference materials (ATP III At-A-Glance: Quick Desk Reference) outlines cholesterol management in a sequence of easy-to-follow steps based on total cholesterol and triglyceride levels. This document can be accessed via the National Heart, Lung and Blood Institutes website at <http://www.nhlbi.nih.gov/guidelines/cholesterol/atglance.pdf>.
  2. A risk assessment tool for estimating 10-year risk of developing CHD (myocardial infarction and coronary death) can be found at the National Heart, Lung and Blood Institutes National Cholesterol Education Program website at <http://hp2010.nhlbi.nih.net/atpIII/calculator?usertype=prof>.

### III. MANAGEMENT

Dyslipidemia should be managed by the client's primary care provider. Caution should be used when starting clients with hyperlipidemia on combined hormonal contraceptives.

- A. Management of clients on combined estrogen/progestin contraceptives:
1. Women over the age of 35 who are starting or continuing combined estrogen/progestin contraceptives should be tested for serum cholesterol.

- If the initial level is in the normal range, follow-up testing and assessment of risk should be done at least every 5 years,
2. Women with a known borderline serum cholesterol (200-239 mg/dL) should be referred for a fasting lipoprotein analysis and receive dietary education and advice on exercise. These clients should have annual cholesterol determinations with follow-up fasting lipoprotein analyses, if still elevated. However, if two or more CHD risk factors are present in these clients, they should be referred to a private provider of their choice for medical management. These clients may not be good candidates for certain hormonal contraceptives. Physician consultation is advised.
  3. Women with a known serum cholesterol level of  $\geq 240$  mg/dL should be set up for a fasting lipoprotein analysis and be referred to a private provider of their choice for medical management and advice while continuing their current contraceptive.
  4. Recent changes in combined oral contraceptives have involved efforts to lower the progestins and to find new formulations capable of producing a more favorable lipoprotein pattern. The latest generation of “new progestin” pills that promote a positive lipid pattern include Ortho-Cyclen®, Ortho Tri-Cyclen®, and Ortho Tri-Cyclen® Lo.
- B. Clients using depot medroxyprogesterone acetate DMPA injections: HDL cholesterol levels fall significantly in women using depot medroxyprogesterone acetate (Depo-Provera®) injections.
- C. Clients using intrauterine contraception: Although theoretical concerns exist about the effect of the LNG IUD (Mirena) on lipids, there are no contraindications for Cu IUD (ParaGard) for women with hyperlipidemia.

#### IV. FOLLOW UP

- A. Provide referrals as indicated
- B. Clients with marked elevated cholesterol levels or hyperlipidemia must be under the care of a private provider familiar with the medical management and treatment modalities available.

#### REFERENCES

1. ACOG. Precip: Primary and Preventive Care. 3rd. Ed., 2004
2. ACOG. Management of Dyslipidemia. Clinical Updates in Women’s Health Care. Vol. 2, No. 1, Winter 2003
3. Hatcher RA et al. Contraceptive Technology. 19th Revised Edition. Ardent Media, Inc., New York, 2007
4. Hackley, B., Kriebs, J., and Rousseau, M. Primary Care of Women: A guide for midwives and women’s health providers. Jones and Bartlett, Sudbury, 2007
5. Tierney LM Jr. et al. Current Medical Diagnosis and Treatment. 44th Ed. McGraw-Hill, New York, 2005

6. CDC. US Medical Eligibility Criteria for Contraceptive Use, 2010. Adapted from the World Health Organization Medical Eligibility Criteria for Contraceptive Use, 4th Edition. MMWR, May 28, 2010; Vol 59.

# DYSMENORRHEA

## I. INTRODUCTION

Dysmenorrhea, painful menstruation, is one of the most common gynecologic disorders. It is the greatest single cause of lost work and school days among young women. Dysmenorrhea may be primary, with no associated organic pathology, or secondary, with demonstrable pathology.

Primary dysmenorrhea is caused by prostaglandin-induced uterine contractions. Primary dysmenorrhea tends to occur with the onset of ovulatory cycles and usually improves with time, coincides with the onset of menstrual bleeding, and frequently is associated with other prostaglandin-mediated symptoms such as nausea, vomiting, diarrhea, and dizziness. The pain is sharp and crampy, and is located in the lower midline. The pelvic examination in a nonmenstruating client with primary dysmenorrhea should not demonstrate tenderness or other pathological changes.

Secondary dysmenorrhea means pelvic pain caused by (secondary to) a disorder or disease. Secondary dysmenorrhea most commonly begins in women who are in their late teens or early twenties and progressively worsens. The pain may begin long before menses and continues during and even after menses. Dyspareunia is also common. Gynecological problems that can cause secondary dysmenorrhea include pelvic inflammatory disease, leiomyomata, endometriosis, adenomyosis, and intrauterine device use. Menorrhagia is not uncommon. The pain of secondary dysmenorrhea often occurs in both lower quadrants. When evaluating a client with crampy pelvic pain, one must be sure to consider the possibility of infection or early pregnancy with associated sequelae. Pelvic examination will demonstrate uterine and/or adnexal tenderness and possibly other findings such as pelvic mass, uterosacral nodularity, or fixation of the uterus with poor mobility.

## II. PLAN OF ACTION

### A. History

1. Take a detailed gynecological history include age, parity, first day of last menstrual period, age of menses onset, length and regularity of cycles, and duration of flow.
2. Take a pain history to include severity, duration, character, location, radiation and the relationship of pain to menarche, menses, Mittelschmerz, coitus, bowel movements, voiding and any other associated symptoms.
3. Document previous known or suspected pelvic problems.
4. Review the past obstetric history, including first trimester losses.
5. Review the past history for other organ system problems that can present with pelvic pain.

6. Review the pelvic infection history, with special attention to recent or past STIs including the history of STIs among current or former partners.
  7. Review the contraceptive history with special attention to past or present IUD use and oral contraception. Document any changes in symptoms with the particular contraceptive use.
  8. Review the surgical history, including surgical procedures involving the cervix, Cesarean delivery, gynecological procedures, and other abdominal procedures.
- B. A complete gynecologic examination with cervical testing, including abdominal and rectal examination, should be performed with special attention directed toward reproducing the pain and detecting other diseases.
  - C. If secondary dysmenorrhea is suspected by history and examination, an appropriate evaluation for disease identification and treatment should be undertaken with physician consultation as indicated.
  - D. If primary dysmenorrhea is suspected by history and examination, medical treatment with prostaglandin inhibitors should be prescribed before proceeding with other diagnostic procedures.
  - E. Oral contraceptives should be considered for treatment of dysmenorrhea in women who desire contraception in addition to pain control. The combined oral contraceptives yield the best results with progestin-only contraceptives being less effective. Depo-Provera may be used to decrease prostaglandin levels.
  - F. Over-the-counter prostaglandin inhibitors:

Drug name Tablet strength	Recommended dose	Maximum dosage in 24 hours
Aspirin 325 mg	325-650 mg q 4 h	3,900 mg
Ibuprofen (Motrin®, Advil®) 200 mg	200-400 mg q 4-6 h	1,200 mg
Naproxen Sodium (Aleve®) 200 mg	400 mg then 200 mg q 8-12 h	800 mg

- G. Severe dysmenorrhea may require prescription prostaglandin inhibitors (nonsteroidal anti-inflammatory drugs – NSAIDs). Contraindications to their use are a history of allergy to aspirin or a history of allergy to any NSAID. Caution is also needed for clients who have ulcer disease, kidney disease, or asthma.

H. Prescription prostaglandin inhibitors:

Drug name Tablet strength	Recommended dose	Maximum dosage in 24 hours
Ibuprofen (Motrin®) 400, 600, 800 mg	400 mg q 4-6 h 600 mg q 6 h 800 mg q 8 h	3,200 mg
Mefenamic acid (Ponstel®) 250 mg	500 mg then 250 mg q 6-8 h	1,250 mg
Naproxen (Naprosyn®) 250, 375, 500 mg	500mg then 250 mg q 6-8 h	1,250 mg
Naproxen Sodium (Anaprox®) 275 mg (Anaprox® DS 550 mg)	550 mg then 275 mg q 6-8 h	1,375 mg

III. FOLLOW-UP

If the client fails a trial of either or both oral contraception and prostaglandin inhibitor therapies, further diagnostic studies including laparoscopy may be indicated and an appropriate physician referral initiated.

REFERENCES

1. Hatcher Ra et al. Contraceptive Technology. 19<sup>th</sup> Revised Edition. Ardent Media, Inc., New York, 2007
2. Ziemann M, Hatcher RA et al. A Pocket Guide to Managing Contraception. Bridging the Gap Foundation, Tiger, GA, 2007
3. ACOG. Health Care for Adolescents. 2003
4. Berek JS. Novak's Gynecology. 14<sup>th</sup> Ed., Lippincott Williams & Wilkins, Philadelphia, PA, 2007

# ECTOPIC PREGNANCY

## I. INTRODUCTION

An ectopic pregnancy is defined as implantation of the fetus in a site other than within the uterine cavity. During the past thirty-five years there has been a marked increase in both the absolute number and rate of ectopic pregnancies in the United States. Although the death rate from ectopic pregnancy has decreased dramatically over this time period due to better diagnosis and treatment, ectopic pregnancy complications cause 15% of all maternal deaths. The possibility of ectopic pregnancy must always be kept in mind.

All types of contraception reduce the risk of both intrauterine and ectopic pregnancy. The risk of a pregnancy being ectopic is increased when it occurs in association with progestin-only contraceptives, IUDs, and tubal ligation, but the overall risk of ectopic pregnancy is lower for women using any type of contraceptive (including progestin-only contraceptives, IUDs, and tubal ligation) than for women not using a contraceptive method.

## II. MEDICAL EVALUATION

There are many reasons for this increased incidence of ectopic pregnancy, but chief among them is scarring of the fallopian tubes from pelvic infection with chlamydia and gonorrhea. Risk factors for ectopic pregnancy include:

- A. Advanced maternal age
- B. DES exposure in utero
- C. Developmental abnormalities of the fallopian tube
- D. Endometriosis
- E. Pregnancy as the result of in vitro fertilization and ovum or embryo transfer
- F. Multiple induced abortions
- G. Pelvic infection or STIs that affect the fallopian tubes
- H. Pregnancy occurring in the presence of Norplant, Depo-Provera, IUD, or Micronor
- I. Current use of ovulation-inducing drugs
- J. Previous Cesarean delivery
- K. Prior abdominal surgery
- L. Prior ectopic pregnancy
- M. Prior infertility
- N. Smoking
- O. Tubal surgery/Tubal ligation
- P. Tumors that distort the fallopian tubes

The principal symptoms of ectopic pregnancy are pain, absence of normal menses and bleeding in the presence of a positive pregnancy test. The combination of either abdominal pain and abnormal vaginal bleeding or abdominal pain and amenorrhea

(or a sequence of these combinations) should alert the clinician to the possibility of ectopic pregnancy.

When evaluating a female client a clinician should:

- A. Keep ectopic pregnancy in mind at all times and particularly when dealing with combinations of amenorrhea, abdominal pain, and/or unusual vaginal bleeding.
- B. Look for pregnancy symptoms and physical findings compatible with ectopic pregnancy.
- C. Obtain urine pregnancy test, and a hemoglobin and/or hematocrit.

### III. FOLLOW UP/REFERRAL

Obtain urgent, immediate gynecologic consultation if ectopic pregnancy is suspected.

### REFERENCES

1. Berek JS. Novak's Gynecology. 14th Ed., Lippincott Williams & Wilkins, Philadelphia, PA, 2006
2. Kriebs, JM and Fahey JO. Ectopic Pregnancy. JMWH 2006
3. Speroff L, Darney P. A Clinical Guide for Contraception. 4th Ed., Lippincott Williams & Wilkins, Philadelphia, PA, 2004
4. ACOG. Precip: Gynecology. 2nd Ed., 2001
5. Hatcher RA et al. Contraceptive Technology. 19th Revised Edition. Ardent Media, Inc., New York, 2007

## HYPERTENSION

### I. INTRODUCTION

High blood pressure is defined as a systolic blood pressure (BP)  $\geq 140$  mm Hg and/or diastolic blood pressure  $\geq 90$  mm Hg.

The prevalence of hypertension is higher among minorities than whites, and it increases with age in all groups. There is increased morbidity and mortality associated with the following cardiovascular complications of hypertension:

- A. Aortic dissection
- B. Congestive heart failure
- C. Coronary artery disease with associated angina pectoris and myocardial infarction
- D. Left ventricular hypertrophy
- E. Peripheral vascular disease
- F. Renal insufficiency
- G. Stroke secondary to cerebral hemorrhage or thromboses

### II. PRINCIPLES OF HYPERTENSION MANAGEMENT

- A. At the level of pre-hypertension, interventions to change lifestyle factors (diet, exercise, smoking) that affect risk should be recommended.
- B. Even patients with labile hypertension or intermittent elevations of blood pressure are at increased risk of later developing persistent hypertension and should be informed of this and observed at regular intervals:
- C. Hypertension control begins with detection and requires close surveillance.
  - 1. The initial evaluation of the hypertensive patient is designed to establish the diagnosis of hypertension, determine its severity, and assess the need of treatment.
  - 2. A complete medical history and physical examination can determine if there is organ involvement, and if other cardiovascular risk factors (including obesity, smoking, hyperlipidemia, and diabetes) are present.
- D. Once a patient is diagnosed with hypertension, the goal of therapy is to reduce cardiovascular morbidity and mortality.
  - 1. The goal should be to lower diastolic blood pressure to levels less than 80 mmHg and lower systolic blood pressure to levels less than 120 mm Hg.
  - 2. The severity of blood pressure elevation and the presence of other complications determine the antihypertensive treatment.
  - 3. Even patients with prehypertension can benefit from antihypertensive therapy.
  - 4. Treatment can prevent progression to more severe levels of hypertension.
  - 5. Nonpharmacologic approaches may be useful as an initial therapeutic regimen and as definitive therapy for some patients. Modifications in diet and lifestyle are generally difficult to achieve, but have been proven to be effective in hypertensive patients. Exercise, weight reduction, restriction of alcohol and sodium, and other lifestyle changes are not costly, and are beneficial in promoting good health for hypertensive and normotensive patients.

### III. MEDICAL EVALUATION

- A. Blood pressure should be measured and the client should be informed of his/her blood pressure reading at each visit.
- B. Blood pressure measurements must be accurate and reproducible.
- C. Proper technique is important and should be as follows:
  - 1. The client should avoid cigarettes and caffeine for 30 minutes before the blood pressure measurement is taken.
  - 2. The client should sit quietly for at least 5 minutes and remain seated during measurement, with the arm parallel to the floor and at the level of the heart.
  - 3. The sphygmomanometer cuff size should be adequate for the arm circumference and should not be too tight or too loose.
  - 4. The sphygmomanometer bladder length should encircle approximately 80% of the arm circumference.
  - 5. Inflate the bladder to 30 mm Hg above the level where the radial pulse is occluded. The systolic blood pressure level is the appearance of the first sound and the diastolic blood pressure level is the disappearance of sound.
  - 6. Repeat the measurement after 2 minutes and average the readings.

### IV. MANAGEMENT OF ELEVATED BLOOD PRESSURE:

- A. Those clients with a diastolic BP 90-100 mm Hg should have a repeat evaluation within 4 weeks. If the BP is still elevated, refer the client to a private health care provider of her choice for medical management.
- B. Refer all clients with a diastolic BP >100 mm Hg for immediate medical management.
- C. When the diastolic BP is <90 mm Hg, but the systolic BP is 140-199 mm Hg, the client should have a repeat BP within 4 weeks. If the BP is still elevated, refer the client to a private health care provider of her choice for medical management.
- D. When the diastolic BP is <90 mm Hg, but the systolic BP is  $\geq$ 200 mm Hg, refer the client for immediate medical management.
- E. Counsel smokers about the health benefits of tobacco cessation.
- F. There is a strong correlation between body weight and blood pressure. Weight reduction to control obesity can result in decreases in BP. Obese patients should be referred to weight reduction programs.
- G. Exercise programs should be encouraged.
- H. Ingestion of more than 2 ounces of alcohol per day is associated with an increased prevalence of hypertension. Those who drink should moderate their alcohol consumption to no more than 1 ounce of ethanol daily. One ounce of ethanol is contained in 2 ounces of 100 proof whiskey, 8 ounces of wine, or 24 ounces of beer.
- I. Some clients with hypertension may achieve BP control through moderate dietary sodium restriction. Advise clients to avoid adding salt to food during preparation or at the table, and to avoid processed foods to which salt is added as a preservative. Restrict sodium to 1.5-2.5 grams (or 4-6 grams of salt) daily.
- J. Calcium intake should be maintained.

### V. HYPERTENSION AND CONTRACEPTIVE USE

- A. Women with pregnancy-induced hypertension can use oral contraception as soon as the blood pressure is normal in the postpartum period.

- B. Low-dose oral contraception can be used in women less than 35 years old with hypertension controlled by medication, and who are otherwise healthy and do not smoke. Consultation should be provided by the client's health care provider who is managing the client's hypertension. Within the clinic setting, physician consultation is appropriate, and the client should be seen at three-month intervals.
- C. Combined oral contraceptives should be discontinued in a client who becomes hypertensive while using this method. The physiologic changes take 3 to 6 months to disappear after stopping combined oral contraception.
- D. Progestin-only contraceptives, the "mini-pills" (Micronor®) and the injection (Depo-Provera®), are less likely to increase blood pressure than combined estrogen-progestin products.
- E. Non-hormonal contraception should be considered for clients with uncontrolled hypertension and those with recurrent blood pressure elevations under the influence of combined estrogen-progestin contraceptives and/or progestin-only contraceptives.

## VI. FOLLOW-UP

Follow up with primary care provider interval medical assessments and long term monitoring of blood pressure as this is essential for appropriate management.  
Follow up on results of any referrals

## REFERENCES

1. National High Blood Pressure Education Program. The Seventh Report of the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure. Bethesda, MD: U.S. Department of Health and Human Services, National Heart, Lung, and Blood Institute, NIH Publication No. 03-5233, December 2003
2. ACOG. Precis: Primary and Preventive Care. 3rd Ed., 2004
3. Hatcher RA et al. Contraceptive Technology. 19th Revised Edition. Ardent Media, Inc., New York, 2007
4. Ziemann M, Hatcher RA, et al. A Pocket Guide to Managing Contraception. Bridging the Gap Foundation, Tiger, GA, 2010
5. Tierney LM Jr. et al. Current Medical Diagnosis and Treatment. 44th Ed., McGraw-Hill, New York, 2005

## PREMENSTRUAL SYNDROME

### I. INTRODUCTION

Premenstrual syndrome (PMS) is a psycho-neuroendocrine disorder with biological, psychological and social parameters that occur regularly in the luteal phase of the menstrual cycle. Although more than 150 symptoms have been attributed to PMS, a relatively discrete number of core symptoms have been shown through well-controlled studies to constitute the syndrome (Appendix A). The diagnosis depends on the demonstration of true cyclicity of symptoms and the exclusion of other medical and psychiatric disorders. (Appendix B).

### II. PRINCIPLES OF DIAGNOSIS

- A. Symptoms occur in the second half of the menstrual cycle.
- B. There is a symptom-free period of at least 7 days (day 4 through 12) in the first half of the cycle.
- C. Symptoms occur in each of 3 consecutive cycles, as demonstrated in a prospective symptom calendar.
- D. The problem is of a magnitude sufficient to affect a woman's work, lifestyle or interpersonal relationships.
- E. The highest incidence of PMS is in women age 30-39. It is rarely encountered in adolescents. With both definition and etiology unclear, therapy is controversial.
- F. Premenstrual dysphoric disorder (PMDD) is a more severe mood disorder related to PMS. To meet the criteria for the diagnosis of PMDD, in contrast to PMS, a woman must have at least a 1-year history of symptomatology, and at least 5 symptoms each month including emotional symptoms and the emotional symptoms must seriously impair the woman's life. Women with PMDD must meet the criteria for the diagnosis as it appears in the American Psychiatric Association Diagnostic and Statistical Manual of Mental disorders.

### III. PLAN OF ACTION

- A. A history and physical exam should be done to exclude organic causes of the client's symptoms.
- B. The client should keep a 3-month calendar diary of symptoms and indicate whether they are mild or severe (Appendix C). A woman who is overwhelmed by a series of complaints should chart only the 3 to 5 complaints that most profoundly bother her.
- C. The absence of a symptom-free interval or presence of symptoms of PMDD suggests the need for further medical and/or psychiatric evaluation (Appendix A).
- D. It is likely several mechanisms are involved in producing the symptoms of PMS. Therapy should be individualized for each woman's specific problems.

- E. General measures for management of PMS include:
  - 1. Reassurance and informational counseling.
  - 2. Reduction of salt, sugar, and caffeine consumption.
  - 3. Increase complex carbohydrates in diet.
  - 4. Relaxation techniques: biofeedback, behavioral techniques, and group support.
  - 5. Regular exercise program.
- F. Taking 1,200 mg of elemental calcium daily might be beneficial for the reduction of PMS symptoms.
- G. Vitamin B<sub>6</sub>, 50-100 mg/day may be helpful.
- H. Many clients find the use of oral contraceptives relieves PMS. For clients who have symptoms of PMS while taking oral contraceptives, an adjustment in formulation or dosage may be beneficial.
- I. Clients diagnosed with PMS and not responding to lifestyle changes and non-medication therapy or those symptomatic of PMDD should be referred to a physician for pharmacologic intervention such as diuretic therapy and antidepressant therapy.
- J. For information on PMS, clients may call PMS access toll free 800-222-4PMS.
- K. Clients with PMS or PMDD need continuity of care since support is essential to management. These clients require frequent visits for evaluation and counseling, and referral to a specialty clinic or private physician should be considered.

## REFERENCES

- 1. ACOG. *Precis: Primary and Preventive Care*. 3rd Ed., 2004  
Hatcher RA et al. *Contraceptive Technology*. 19th Revised Edition. Ardent Media, Inc., New York, 2007
- 2. ACOG. *Premenstrual Syndrome*. Practice Bulletin #15, April 2000  
Schuiling, K., Likis, F., *Women's Gynecologic Health*., Jones and Bartlett, Sudbury, MA, 2006.

APPENDIX A

**SYMPTOMS OF PREMENSTRUAL SYNDROME**

**MOOD DISTURBANCES**

Anxiety  
Irritability  
Tension  
Mood swings/lability  
Depression  
Anger  
Hostility

**COGNITIVE SYMPTOMS**

Confusion  
Difficulty concentrating  
Oversensitivity  
Forgetfulness

<b>SOMATIC SYMPTOMS</b>	<b>BEHAVIORAL CHANGES</b>
Fatigue Bloating Breast tenderness Acne Swelling Gastrointestinal symptoms Increased appetite Headache Insomnia Joint pain Constipation	Food cravings Social withdrawal Argumentative behavior Social isolation Crying spells

APPENDIX B

**DIFFERENTIAL DIAGNOSIS**

**PSYCHIATRIC ILLNESS**

Major depressive disorder  
Bipolar disorder  
Panic disorder  
Posttraumatic stress disorder  
Somatization disorder  
Personality disorder  
Substance abuse

**MEDICAL ISSUES**

Vascular headaches  
Cardiovascular disease with edema  
Renal disease  
Hepatic disease  
Hypothyroidism  
Irritable bowel

APPENDIX C

**PREMENSTRAUL SYNDROME CALENDAR**

CODE	SYMPTOM LIST	DAY	MONTH	MONTH	MONTH	MONTH
T	Tension	1				
IR	Irritability	2				
D	Depression	3				
AX	Anxiety	4				
MS	Mood Swings	5				
FO	Forgetfulness	6				
DC	Difficulty concentrating	7				
FA	Fatigue	8				
AS	Abdominal symptoms	9				
HA	Headaches	10				
BT	Breast Tenderness	11				
S	Swelling	12				
BL	Bloating	13				
IN	Insomnia	14				
CS	Crying spells	15				
		16				
		17				
		18				
		19				
		20				
		21				
		22				
		23				
		24				
		25				
		26				
		27				
		28				
		29				
		30				
		31				

Instructions:

1. Check off the symptoms you experience most frequently. If you have other symptoms not on the list, write them in the spaces provided and give them a code different from any other on the list.
2. On the date you experience any symptom(s) on the list, fill in the codes(s) in the space next to the date. Do not wait a few days to list your symptoms because you may either minimize or over-emphasize your symptoms.
3. If your symptoms are mild, use small letters (ie: ax); if severe, use capital letters (ie: AX)
4. Each day you have menstrual bleeding write an "M" with a circle around it.

## POSTPARTUM EVALUATION AND CONTRACEPTION

### I. INTRODUCTION

The postpartum period is defined as the time immediately after delivery extending to approximately 6 weeks postpartum. The majority of women resume sexual activity within several weeks of the delivery. The amount of time following delivery that a woman is infertile is highly variable and dependent on multiple factors, including breastfeeding status. Ovulation can occur even if the mother has not resumed menstruation and can happen as early as 25 days postpartum, underscoring the importance of postpartum contraceptive plan. The probability of ovulation occurring before resumption of menstruation increases over time.

The need to prevent an unplanned pregnancy with a shortened interconception period needs to be balanced with the need to avoid risks of cardiovascular events in women during the postpartum period. Hematologic changes that occur normally during pregnancy result in an increased risk for VTE during the postpartum period. In addition, many postpartum women have additional risk factors that further increase their risk for VTE, such as age  $\geq 35$  years, smoking, or recent cesarean delivery. Combined hormonal contraceptives are also associated with an increased risk of VTE among health women of reproductive age. Due to these concerns, recommendations regarding the use of CHC in the postpartum period have changed (see below).

Multiple factors must be considered when making family planning decisions during this time period. These include (1) whether a woman is breastfeeding, (2) the woman's age and smoking status, (3) prior experience(s) with various family planning methods, (4) whether contraception was initiated in the hospital or at a follow-up visit, (5) timing of desired resumption of sexual activity, and (6) general medical history.

### II. PLAN OF ACTION

- A. Determine whether the client has been seen by her intrapartum care provider(s) since delivery.
- B. If the client has not been seen, complete the history and physical examination.
  - 1. Include in the history route of delivery, current contraception usage, breastfeeding status (exclusive vs. supplemented), amount of bleeding, and resumption of sexual activity. Screen for postpartum depression.
  - 2. Include in the physical, examination of the breasts, surgical incision and/or episiotomy (if any), and Pap test, if indicated (refer to "Cervical Cytology and Management of Abnormal Cytology Results" Clinical Guideline)
- C. Answer questions and provide general postpartum counseling
  - 1. Pelvic rest (no sex, no douching, no tampons) is recommended for 4-6 weeks.
  - 2. Clients should be strongly advised to abstain from sexual intercourse until postpartum bleeding has stopped.

3. Clients should be encouraged to resume sexual activity only when they feel comfortable and ready.
4. Exercise should be encouraged and can resume gradually. Breastfeeding women should try to breastfeed just prior to exercise to minimize discomfort with engorgement and should try to delay breastfeeding until about an hour after exercise to allow any lactic acid accumulation to dissipate.
5. For breastfeeding women, caloric intake should be 500 kcal higher than usual.
6. For breastfeeding women, calcium intake should be 1200 mg/day.
7. If having breastfeeding difficulties, refer for lactation support/consult.
8. A daily multivitamin is recommended.
9. Discuss contraception options (see below) and initiate contraceptive plan as appropriate

### III. POSTPARTUM CONTRACEPTION OPTIONS AND CONSIDERATIONS

Choice of contraception method depends on previous history of use, successes or failures, medical contraindications, age, smoking status, and the other usual considerations. Once a choice has been made for an appropriate postpartum method of contraception, the method-specific guideline should be referenced.

#### A. Combined hormonal contraception (CHC)

1. Contraindicated in women with peripartum cardiomyopathy (USMEC 3,4)
2. Non-breastfeeding women:
  - a. In women who are <21 days postpartum, use of combined hormonal contraceptives represents an unacceptable health risk and should not be used (USMEC Category 4).
  - b. In women who are 21--42 days postpartum and have other risk factors for VTE in addition to being postpartum (smoking, deep venous thrombosis/pulmonary embolism, known thrombogenic mutations, and peripartum cardiomyopathy), the risks for combined hormonal contraceptives usually outweigh the advantages and therefore combined hormonal contraceptives generally should not be used (USMEC Category 3);
  - c. In women who are 21--42 days postpartum and in the absence of other risk factors for VTE, the advantages of combined hormonal contraceptives generally outweigh the risks, and they can usually be used (category 2).
  - d. In women who are >42 days postpartum, no restriction applies for the use of combined hormonal contraceptives because of postpartum status (category 1). Nonetheless, any other medical conditions still should be taken into consideration when determining the safety of the contraceptive method.
3. Breastfeeding women:
  - a. In women who are <21 days postpartum, use of combined hormonal contraceptives represents an unacceptable health risk and should not be used regardless of breastfeeding status (USMEC Category 4).

- b. In breastfeeding women >21 days, but < 1 month postpartum, CHC are associated with decrease in breastfeeding success and other forms of birth control should be first choice (USMEC Category 3).
- c. In breastfeeding women >30 days postpartum, without risk factors for VTE, (smoking, deep venous thrombosis/pulmonary embolism, known thrombogenic mutations, and peripartum cardiomyopathy) and the advantages of CHC outweigh the risks, they can be used, but milk supply may be affected by CHC throughout breastfeeding course (USMEC Category 2). If ≤42 days postpartum and risk factors for VTE exist (smoking, deep venous thrombosis/pulmonary embolism, known thrombogenic mutations, and peripartum cardiomyopathy), CHC are contraindicated regardless of breastfeeding status.
- B. Progestin-only methods: Progestin-only hormonal methods, including progestin-only pills (mini-pill), depot medroxyprogesterone acetate injections (DMPA), and implants, are safe for postpartum women, including women who are breastfeeding, and can be initiated immediately postpartum (USMEC Categories 1 and 2).
- C. IUCs: IUCs, including the levonorgestrel-releasing IUD and copper-bearing IUD, also can be inserted postpartum, including immediately after delivery (USMEC Categories 1 and 2) and are not associated with an increase in complications. Although IUD expulsion rates are somewhat higher when insertion occurs within 28 days of delivery, continuation rates at 6 months are similar among women who receive an IUD postpartum and those who plan for delayed insertion
- D. Condoms: Condoms can be used anytime (USMEC Category 1)
- E. Diaphragm: Diaphragm should be started at 6 weeks postpartum (USMEC Category 1 after 6 weeks).
- F. Natural Methods:
  1. Abstinence is the most efficacious form of contraception.
  2. If a woman is breastfeeding regularly without any supplementation or pumping, the Lactational Amenorrhea Method (LAM) can be up to 98% effective as a form of contraception. However, when feeding supplements are given, a second form of contraception should be used.
  3. Caution clients that it is difficult to practice fertility awareness before their cycles are reestablished.
- G. Sterilization: Vasectomy or tubal ligation is an appropriate option for couples who desire a permanent contraception option.

#### IV. FOLLOW-UP

Follow-up timing is dependent on the type of contraception that is initiated.

#### REFERENCES

1. CDC Medical Eligibility Criteria for Contraceptive Use. MMWR, Vol. 57, No. RR-4, June 18, 2011.
2. Hatcher RA et al. Contraceptive Technology. 19th Revised Edition. Ardent Media, Inc., New York, 2007.

3. Cunningham FG et al. Williams Obstetrics. 22nd Ed., McGraw-Hill, New York, 2005
4. ACOG. Exercise During Pregnancy and the Postpartum Period. Committee Opinion #267, January 2002.
5. Association of Reproductive Health Professionals. Postpartum Counseling: A Quick Reference Guide for Clinicians. 2003

## SUBSTANCE ABUSE

### I. INTRODUCTION

Substance abuse is the use of alcohol, illegal drugs, prescription drugs or other substances in ways not conducive to the overall health of the individual. Delegate agency sites must offer substance abuse counseling and must provide appropriate referral as indicated.

- A. Prevalence in the United States: percent of persons with use in past month:
  - 1. Age  $\geq$ 12 with any illicit drug use: 8.7% (2009)
  - 2. Age  $\geq$ 12 with marijuana use: 6.6% (2009)
  - 3. Age  $\geq$ 12 with nonmedical use of psychotherapeutic drug: 2.8% (2009)
- B. Prevalence in Maryland: percent of persons with alcohol consumption
  - 1. Heavy drinkers: males having > 2 drinks per day and females having >1 drink per day: 4.5 % (2010)
  - 2. Binge drinkers: males having >5 drinks on one occasion, females having >4 drinks on one occasion: 14.6 % (2010)

### II. MEDICAL EVALUATION/CLIENT HISTORY

Delegate agency site personnel with appropriate training must be aware of signs and symptoms of substance abuse and community resources.

- A. Physical signs include: track marks and other evidence of intravenous drug use, alcohol in the breath, scars or injuries, hypertension, tachycardia or bradycardia; tremors; slurred speech, poor hygiene, liver renal disease, rhinorrhea, chronic cough, nervous mannerisms, pinpoint or dilated pupils, reproductive dysfunction (hypogonadism, irregular menses, miscarriage, infertility, fetal alcohol syndrome).
- B. Psychological problems include: memory loss, depression, anxiety, panic disorder, paranoia, unexplained mood swings, personality changes, intellectual ability changes, sexual promiscuity, legal problems (theft, arrest), and unreliability.

### III. CLIENT COUNSELING AND EDUCATION

During the discussion the goal is to engage the client in non-judgmental conversations (brief interventions) about their substance use and can help them decide whether they should reduce their use to improve their long-term health.

- A. CAGE: for alcohol abuse CAGE questionnaire may be utilized:
  - 1. Have you ever felt you ought to **C**ut down on your drinking?
  - 2. Have people **A**nnoyed you buy criticize the your drinking?
  - 3. Have you ever felt bad or **G**uilty about your drinking?
  - 4. Have you ever had a drink first and is the morning to steady your nerves or get rid of the hangover (**E**ye opener)

- B. SBIRT: Screening Brief Intervention and Referral to Treatment can help determine whether a client uses alcohol and/or drugs in unhealthy ways. SBIRT is a comprehensive integrated public approach to the delivery of early intervention and treatment services for clients with substance abuse disorders as well as individuals at risk for developing those disorders. The family planning encounter provides an opportunity for early intervention and provision of services before more severe consequences occur.

During the discussion, the goal is to engage the client in non-judgmental conversations (brief interventions) about their substance use to help them decide whether they should reduce their use to improve their health.

SBIRT approach offers the following advantages:

1. Screening quickly assesses the severity of substance abuse into the first appropriate level of treatment. Short, well-tested questionnaire should be utilized (such as the ASSIST, the CRAFFT, the AUDIT, the DAST, etc) to identify client risks.
2. Brief Intervention focuses on increasing inside an awareness regarding substance abuse and motivational cord behavior change
3. Referral to Treatment provides those individuals as needing more expensive treatment with access to specialty care

- C. More information on substance abuse treatment, referral to treatment and/or self-assessment or screening services visit SAMHSA online to locate substance abuse facilities and treatment help <http://dasis3.samhsa.gov/Default.aspx> or call SAMHSA 24-hour toll free referral helpline at 1800662 HELP (1-800-662-4357).

Delegate agency's must have information available to address the needs of counseling adolescents if services are not available on site an appropriate referral must be made. Comprehensive research and resources on the prevention of underage drinking is available at **StopAlcoholAbuse.Gov**. <http://www.stopalcoholabuse.gov/>. Materials and resources on this site are provided by 15 federal agencies of the Interagency Coordinating Committee on Underage Drinking Prevention (ICCPUD). More information on ICCPUD is available on this site as well.

## REFERENCES

1. Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use & Health. Table 61. Available from: <http://oas.samhsa.gov/nsduh.htm>.
2. CDC, Behavioral Risk Factor Surveillance System, Prevalence and Trends, Maryland 2010 Alcohol Consumption.

## URINARY TRACT INFECTION

### I. INTRODUCTION

Infections of the lower urinary tract are one of the most common types of infection. They usually result from ascending transurethral invasion of the bladder by pathogenic gram-negative aerobic bacilli normally present in the large bowel and on the perineum. *Escherichia coli* represent 80 to 90% of the infectious agents implicated in acute cystitis. Other organisms found are *Klebsiella*, *Proteus*, *Enterobacter*, *Pseudomonas*, *Staphylococcus*, and *D streptococcus*.

A reliable indicator of an active urinary tract infection is a bacterial count over 100,000 organisms of the same species per milliliter in a fresh "clean-catch" midstream specimen. Lower counts may be significant and may require treatment.

### II. MEDICAL EVALUATION

- A. Most clients who report symptoms (such as frequency, dysuria, and urgency) should have a clean-catch midstream specimen sent for urinalysis and culture/sensitivity. This procedure is advisable for postpartum clients with a history of UTI during pregnancy, and for clients with persistent proteinuria.
- B. Risk factors for cystitis include history of urinary tract infection, recent sexual intercourse, and/or recent spermicide use.
- C. The presence of leukocyte esterase (reflecting pyuria) and nitrite (reflecting the presence of *Enterobacteriaceae*, which convert urinary nitrate to nitrite) is indicative of acute infectious cystitis and presumptive treatment should be started for women with symptoms and positive leukocyte esterase and/or nitrites.
- D. Clients with symptoms of pyelonephritis (such as fever, flank pain, abdominal pain and nausea) should be referred promptly for physician evaluation and treatment, since they may require IV antibiotics and hospitalization.

### III. TREATMENT

Presumptive treatment is appropriate for symptomatic clients before culture and sensitivity results are available.

- A. Recommended treatment options (prior to culture):
  - 1. Nitrofurantoin monohydrate macrocrystals (Macrobid ) 100 mg p.o. q 12 h x 3 or 7 days.
  - 2. Trimethoprim-sulfamethoxazole (Bactrim DS® or Septra® DS) 1 tablet p.o. q 12 h x 3, 7, or 10 days.
  - 3. Cephalexin (Keflex®) 500 mg p.o. qid x 7 or 10 days.
  - 4. Ciprofloxacin (Cipro®) 250-500 mg p.o. q 12 h x 1 or 3 days.
- B. Specific therapy may be supplemented by a topical urinary analgesic in clients with severe symptoms: Phenazopyridine (Pyridium®) 200 mg p.o. tid after meals x 2 days. Clients may purchase phenazopyridine 95 mg over-the-counter: trade names include AZO®, Uristat®, and Prodiur®.

- C. In an otherwise healthy woman with no risk factors and little or no history of lower urinary tract infections, a short course of therapy may be given without obtaining a culture.
- D. Treatment for one to three days with Macrobid® or Cipro® would be appropriate. Persistent symptoms of cystitis or urethritis would require urine culture and sensitivity studies.

#### IV. FOLLOW-UP

- A. High-risk clients and those with recurrent urinary tract infections should have follow-up urine cultures one to two weeks after treatment is completed.
- B. A diaphragm with spermicide for contraception should be avoided in clients with documented recurrent urinary tract infections. This method alters normal vaginal bacterial flora and increases the risk for cystitis.
- C. Clients with persistent or recurrent infections, documented by culture, should be referred to a physician for evaluation. Long-term antibiotic therapy may be indicated, or the client may be a candidate for urologic evaluation.

#### REFERENCES

1. ACOG. Precip: Primary and Preventive Care. 3rd Ed., 2004
2. Tierney et al. Current Medical Diagnosis and Treatment. 47th Ed., McGraw-Hill, New York, 2008

#  
#

#

## VULVOVAGINAL CANDIDIASIS

### I. INTRODUCTION

Vulvovaginal candidiasis is a fungal infection of the vagina and/or vulvar/perineal area that accounts for approximately one-third of cases of vaginitis. The most frequent cause of candida vulvovaginitis is candida albicans. The usual clinical picture is that of itching, burning and erythema. Vulvovaginal candidiasis is not considered a sexually transmitted disease.

### II. HISTORY AND PHYSICAL EVALUATION

#### A. History may include:

1. Recent antibiotic use
2. Corticosteroid use
3. Diabetes/hyperglycemia
4. Pregnancy
5. Immunosuppressive disorders

#### B. Symptoms may include:

1. Vulvovaginal pruritis
2. White, odorless discharge
3. Dysuria
4. Dyspareunia

#### C. Physical exam findings may include:

1. Erythema of the vulva and vaginal mucosa
2. Vulvar edema
3. Thick, adherent, and "cottage cheese-like" discharge (although may be thin and lose discharge as well)
4. Evidence of excoriation and fissures

### III. DIAGNOSIS

Diagnosis is usually made by direct microscopic visualization of hyphae or spores (10% KOH wet prep). A negative KOH test, however, does not exclude the diagnosis. Candida found on a Pap smear may represent an asymptomatic carrier not necessarily needing treatment.

### IV. PLAN

Provide treatment if client has above signs or symptoms following the most recent CDC STD Treatment Guidelines found at:

<http://www.cdc.gov/std/treatment/default.htm>

## V. SPECIAL TREATMENT CONSIDERATIONS

Certain antifungal drugs interact with other medications. Miconazole and warfarin can lead to bleeding or bruising. Fluconazole may interact with coumarin-type anticoagulants, cyclosporine, oral hypoglycemics, phenytoin, rifabutin, rifampin, tacrolimus, theophylline, and COX-2 inhibitors (Celebrex®).

## VI. CLIENT EDUCATION/COUNSELING

- A. Many of the OTC vaginal preparations also have in the packaging a tube of the same ingredient for external vulvar use.
- B. Latex barrier devices, including latex condoms and diaphragms, may break down when in contact with oil-based vaginal medications, such as miconazole, clotrimazole, terconazole, tioconazole, and butoconazole.
- C. When there is vulvar inflammation, the use of an antifungal cream with or without a corticosteroid (such as hydrocortisone cream 0.5-1.0%, OTC) will reduce symptoms more readily.
- D. Routine treatment of sex partners is usually unnecessary since this infection is not acquired through sexual intercourse.

## VII. FOLLOW-UP

Clients should return for follow-up visits if symptoms persist or recur. Women with frequent or persistent infections should be evaluated for risk factors and be treated with the 7-day therapies. Multiple treatments and/or maintenance regimens may be required.

## REFERENCES

1. CDC, Sexually Transmitted Diseases Treatment Guidelines. 2010
2. ACOG. Precip: Gynecology. 2nd Ed., 2001
3. Hatcher RA et al. Contraceptive Technology. 19th Revised Edition. Ardent Media, Inc., New York, 2007