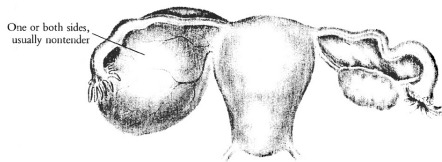


NURS 821 Metabolic and Endocrine Disorders; Alterations in Reproduction

Lecture 9

Part 7 Alterations in Reproduction:
Selected Disorders of the Female
Reproductive Tract

Ovarian Cyst



Nutrition and Reproductive Cancers

- Obesity increases risk for endometrial cancer (ACS, 1996)
- High fat and alcohol increase risk for breast cancer (ACS, 1996)
- No other definite associations with testicular, prostate, or ovarian cancers

Breast and Ovarian Cancer Gene

- BRCA 1 has been identified as a gene which increases women's susceptibility to breast and ovarian cancer (Miki et al., 1994).

Ovarian Cancer

- Risk – Fertility drug association; conflicting data
- Theories:
 - Increased number of uninterrupted ovulations increases risk
 - HCG increases risk
 - Pregnancy, breastfeeding, contraceptives decrease risk
- Fertility drugs without pregnancy cause greater risk than fertile; fertility drugs and pregnancy: no increased risk.

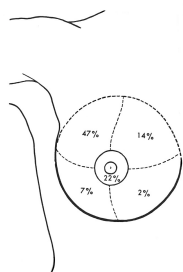
Breast Cancer Risk Factors

- | | |
|--|--|
| <ul style="list-style-type: none">• Significant Risk Factors<ul style="list-style-type: none">• Female sex• Age greater than 50 yr• Family history of breast cancer (mother or sister)• History of previous breast cancer | <ul style="list-style-type: none">• Less Significant Risk Factors<ul style="list-style-type: none">• History of endometrial cancer• Obesity• Nulliparity• First pregnancy after age 30• Early menarche• Late menopause• Caucasian group member• European-Jewish decent• Residence in North America or Northern Europe• High-fat diet• Heavy use of alcohol• Cigarette smoking |
|--|--|

Breast Cancer Risk Factors

- Influenced by factors affecting circulating hormone levels throughout life: age at menses, number of pregnancies, breastfeeding, obesity, physical inactivity
- Weak association with high fat diet and alcoholic intake
- Prevention: limit alcohol, eat fruits and vegetables, be physically active, avoid obesity

Distribution of Breast Cancers



- 47% of tumors are found in the upper outer quadrant!

Breast Cancer Prognostic Indicators (Donegan, 1997)

- Tumor angiogenesis – more blood supply, worse prognosis
- Staging – TNM system is reliable
- Axillary lymph node metastasis – unreliable
- Internal mammary lymph node metastasis – reliable
- Steroid hormone receptors – ER+, prolonged disease-free survival post-Tx, superior overall survival even post-recurrence

GENERAL CRITERIA FOR PREMENSTRUAL DYSPHORIC DISORDER* (PMDD)

"The criteria for PMDD describe those women for whom a rigorous prospective assessment confirms a pattern of severe depressive symptoms that occurs regularly during the last week of the menstrual cycle and markedly interferes with daily living."

From A. Francis, Chair DSM-IV Task Force, personal communication, April 12, 1993.
*PMDD will be included as an example of a nonspecific depressive disorder in the American Psychiatric Association's next edition of *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*

NATIONAL INSTITUTES OF HEALTH GUIDELINES

The diagnosis of PMS requires the documentation of at least a 30% increase in symptom severity in the 5 days before menses compared with the 5 days after menses in at least 2 of 3 menstrual cycles.

From National Institutes of Health. (1983). *NIMH premenstrual syndrome workshop guidelines*. April 14-15, 1983. Rockville, MD: Author.

DIAGNOSTIC AND RESEARCH CRITERIA FOR PMS

1. The pretense by self-report of at least one of the following somatic and effective symptoms during the 5 days before menses in each of the three prior menstrual cycles:

AFFECTIVE

Depression
Angry outbursts
Irritability
Social withdrawal
Fatigue

SOMATIC

Breast tenderness
Abdominal bloating
Headache
Swollen extremities

2. Relief of the above symptoms within 4 days of the onset of menses, without recurrence until at least cycle day 12.

3. The symptoms are present in the absence of any pharmacologic therapy, hormone ingestion, drug, or alcohol.

4. The symptoms occur reproducibly during two cycles of prospective recording.

5. Identifiable dysfunction in social or economic performance by one of the following criteria:
Marital or relationship discord confirmed by partner
Difficulties in parenting
Poor work or school performance, attendance/irregularity
Increased social isolation
Legal difficulties
Suicidal ideation
Seeking medical attention for somatic symptom(s)

From Monula, 1992.

Preeclampsia

- Definition-A potentially fatal pregnancy complication causing blood vessel contraction.
- Complications-eclampsia and may result in maternal and fetal death.
- Incidence-5% primiparas; 1-2% of mothers with subsequent pregnancies (NICHD, 1999).

Preeclampsia Theories

- Low levels of prostacyclin (PGI₂) and high levels of thromboxane (TxA₂).
 - PGI₂ causes vasodilation
 - TxA₂ causes vasoconstriction
 - Levels abnormal pre- and peripartum
 - All preeclamptic women had low levels of PGI₂
- Based on a study of 2,294 women tested before study enrollment, 13-21 weeks, 26-29 weeks, 36 week of pregnancy. (NICHD, 1999)