## ATROPHIC VULVOVAGINITIS

### DEFINITION
Genital changes caused by menopause and by other estrogen-deficient states can cause uncomfortable genital symptoms. In the vagina, these changes include loss of rugation, elasticity and lubrication as well as epithelial thinning. On the vulva, the skin can become thin, dry and inelastic. About 5% to 15% of premenopausal women and 10-40% of postmenopausal women complain of problems, such as dyspareunia, dysuria as a result of these changes. The introduction of treatments for erectile dysfunction has increased the proportion of postmenopausal women who are symptomatic.

### SUBJECTIVE
Must include at least one of the following:
1. Symptoms of estrogen deficiency due to menopause, breastfeeding, or use of DMPA or GnRH agonists such as:
   a. Vulvar pruritus
   b. Dyspareunia
   c. Vulvar or vaginal tenderness or burning.
   d. Post-coital spotting (must rule out other causes).
   e. Urinary burning, urgency or frequency (must rule out infection and other causes).
2. Persistent genital symptoms despite systemic hormonal therapy.

Must exclude: Any absolute contraindication to estrogen (See Attachment 1 to Vasomotor Symptoms protocol) if considering hormonal therapy.

### OBJECTIVE
May include:
1. Vulva: labia with decreased subcutaneous fat, thin hair distribution and thin, easily traumatized epithelium (fissures post coitus).
2. Vagina: dry, shiny, thin, pale, friable mucosa with diffuse or patchy areas of petechia or ecchymosis or fissures following coitus or other trauma.
3. Cervix: no obvious lesions, but may be flush with vaginal wall or friable during speculum exam.

Must exclude: Any suspicious-looking lesion – suspicious for either carcinoma (vulva, vaginal or cervical) or other dermatologic pathologies (such as, hyperplasia, lichen sclerosis, lichen planus).

### LABORATORY
May include:
1. Wet mount positive for parabasal cells (small round or oval cells with large vesicular nuclei) and absence of other pathogens.
2. Urine dipstick with no evidence of infection.

### ASSESSMENT
Symptomatic atrophic vulvovaginitis.

### PLAN
1. If patient symptomatic only during coitus, consider use of water soluble or silicone vaginal lubricants.
2. **Premenopausal** women with atrophic vulvovaginitis who have no contraindication to estrogen use and who are unresponsive to lubricants due to:
   a. Breastfeeding, offer one of the following:
      1) A ribbon of vaginal estrogen placed in the lower third of the vagina and/or affected vulvar areas twice a week. (May compromise efficacy of latex condoms).
      2) An estrogen-containing birth control method if no category 4 US MEC conditions for use of estrogen-containing methods or any Category 3 conditions requiring MD consult). NuvaRing is the preferred delivery system.
   b. DMPA use: see postmenopausal section below.
3. **Perimenopausal** women with atrophic vulvovaginitis unresponsive to lubricants, provide one of the following:
   a. NuvaRing or combined oral contraceptives if patient has no category 4 US MEC conditions for use of estrogen-containing methods or any Category 3 conditions before MD evaluation.
b. Postmenopausal estrogen therapies from section below coupled with either cyclic or continuous progestin:

1) Cyclic progestin: Daily treatment with MPA 5-10 mg or with another progestin daily for at least 10 days when needed (i.e. when more than 30 or 35 days since LMP).

2) Continuous progestin. Choose one of the following:
   a) LNG-IUS or DMPA if needs contraception and has no US MNEC Category 4 conditions prohibiting use of DMPA and LNG-IUS or any Category 3 conditions to patient method use before MD approval.
   b) Medroxyprogesterone acetate (MPA) 2.5 mg. orally daily if she does not need hormonal contraception (abstinent or permanently sterilized).

4. **Postmenopausal** women with atrophic vulvovaginitis unresponsive to lubricants:
   a. If she has no contraindications to use of estrogen treat with one of the following:
      1) Estrogen vaginal cream: either ½ applicator placed at top of vault or a 3-4 cm ribbon of the same estrogen cream applied digitally to lower 1/3 of vagina and/or to affected vulvar areas twice a week.
      2) Estrogen vaginal ring: place one ring per vagina every 3 months per manufacturer’s instructions.
      3) Estrogen vaginal suppositories placed at top of vagina as directed by manufacturer’s instructions.

b. If the woman has an intact uterus, the North American Menopause Society in 2010 concluded that no progestin need be added to vaginal estrogen therapies. However, prompt evaluation is needed should the woman have any bleeding.

   1) Women with risk factors for endometrial cancer may benefit from periodic progestin challenges on a case-by-case basis to assess early occult endometrial disease unless they are using DMPA or LNG-IUS. Typical dosages used are medroxyprogesterone acetate (MPA) 5-10 mg. daily for 10 days or norethindrone acetate 5 mg daily for 10 days. Consult MD if patient has any withdrawal bleeding.

   c. Periodically (every 6-12 months) reevaluate need for continued estrogen therapy and reassess risks to insure the benefit/risk ratio still favorable.

5. All topical estrogens are petroleum based and can damage the integrity of latex condoms.

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### PATIENT EDUCATION

1. Review instructions for use of estrogen vaginal creams, rings or suppositories.
2. Advise avoidance of intercourse immediately after application of estrogen cream or suppository to allow absorption and to reduce male exposure.
3. Explain that vaginal elasticity may improve by 6 weeks of topical estrogen therapy, but vaginal lubrication may not significantly improve for 6-12 months. Artificial lubrication may be helpful until that time. Water soluble lubricants, silicone based lubricants may be used by all women without allergies. For women not using latex contraceptives products such as Crisco provide excellent and safe lubrication.

4. Advise patient that systemic absorption of estrogen from the vagina may produce blood levels as high as oral or patch post menopausal estrogen products and that side effects, such as breast tenderness and headache, are possible.

5. Tell the woman that initially she may feel a burning sensation with application of estrogen cream, especially if she has considerable atrophy. Explain that she can wipe off the excess cream and retry the next time she is due for treatment. This problem should rapidly subside as the tissue thickens.

6. Educate her about the following warning signs for complications of estrogen therapy which require prompt evaluation:
   a. Any abnormal vaginal bleeding.
   b. Symptoms of thrombophlebitis or thromboembolism.
   c. Severe headaches, faintness, dizziness or changes in vision.
   d. Breast lumps.
   e. Jaundice.

7. Advise that estrogen creams/suppositories may reduce integrity of latex condoms.
1. Vulvar, vaginal or cervical lesions (rule out lichen sclerosis, vulvar hypertrophy, lichen planus).
2. Persistent or recurrent symptoms, which are refractory to therapy.
3. Abnormal genital bleeding (including any postmenopausal bleeding).
4. Post coital spotting either before treatment or with treatment.
5. Patients with contraindications to estrogen therapy who do not respond to lubricants.

**REFERENCES**