Atrophic Vaginitis

**Synonyms:** genitourinary syndrome of menopause, urogenital atrophy

Atrophic vaginitis is very common in postmenopausal women, due to the falling levels of oestrogen. The term genitourinary syndrome of menopause (GSM) is now usually used instead of vulvovaginal atrophy or atrophic vaginitis.[1]

During the reproductive years, the vaginal epithelium thickens under the influence of oestrogen and produces glycogen. As they die, the glycogen-rich cells provide food for *Döderlein's bacilli*, which in turn produce lactic acid, maintaining an acidic vaginal environment. After the menopause, oestrogen levels fall and this produces changes in the vagina:

- The vaginal mucosa becomes thinner, drier, less elastic and more fragile. It may become inflamed.
- The vaginal epithelium may become inflamed, contributing to urinary symptoms (see under 'Presentation', below).
- Changes in vaginal pH and vaginal flora may predispose to urinary tract infection (UTI) or vaginal infections.
- Reduced oestrogen levels may affect periurethral tissues and contribute to pelvic laxity and stress incontinence.

**Aetiology**

Surveys have shown that 45% to 63% of postmenopausal women have experienced vulvovaginal symptoms, most commonly vaginal dryness. However, many women do not seek professional help or advice regarding their symptoms.[2]

The following can lead to atrophic vaginitis occurring:

- Natural menopause or oophorectomy.
- Anti-oestrogenic treatments - eg, tamoxifen, aromatase inhibitors.
- Radiotherapy or chemotherapy.
- It can also occur postpartum or with breast-feeding, due to reduced oestrogen levels.

**Presentation**

It is important to initiate discussion regarding any vaginal dryness with postmenopausal women, as many women are very reluctant to talk about it or initiate conversation about it. Women are poorly aware that vulvovaginal atrophy is a chronic condition with a significant impact on sexual health and quality of life and that effective and safe treatments may be available.[3]

**Symptoms**

- There may be no symptoms.
- Dryness of the vagina is the most common symptom.
- There may be burning or itching of the vagina or vulva.
- Dyspareunia.
- Vaginal discharge (usually white or yellow).
- Vaginal bleeding or postcoital bleeding.
- Urinary symptoms - eg, increased frequency, nocturia, dysuria, recurrent UTI, stress incontinence or urgency.

**Signs**

- External genitalia may show reduced pubic hair, reduced turgor or elasticity, and a narrow introitus.
- Be aware that vaginal examination may be uncomfortable or painful if the patient has atrophic vaginitis.
- Vaginal examination may show:
  - Thin mucosa with diffuse erythema.
  - Occasional petechiae or ecchymoses.
  - Dryness.
  - Lack of vaginal folds.

- Atrophic vaginitis may be diagnosed by the practice nurse when a smear is being taken.

**Investigations**

- Investigations may not be necessary if the diagnosis is clear and there are no clinical features causing concern.
- Investigation may be needed to exclude other problems:
  - Any postmenopausal bleeding requires investigation.
  - If there is discharge or bleeding, an infection screen may be relevant (for vaginal infections or endometritis).
  - Other causes of recurrent UTI.
  - Screen for diabetes may be considered (uncontrolled diabetes can contribute to symptoms).
Other possible investigations are:
- Vaginal pH testing (using pH paper and sampling from the mid-vagina, not the posterior fornix). The result is more alkaline in atrophic vaginitis.
- Vaginal cytology - can show lack of maturation of the vaginal epithelium, typical of atrophic vaginitis.

Differential diagnosis

- Genital infections - eg, bacterial vaginosis, trichomonas, candidiasis, endometritis:
  - These may co-exist, as atrophic vaginitis predisposes the vagina to bacterial infection.
  - Trichomonas and bacterial vaginosis also give a more alkaline result on pH testing (pH>4.5).
- Other causes of vaginal bleeding or postmenopausal bleeding.
- Uncontrolled diabetes may cause vaginal or urinary symptoms.
- Local irritation due to soap, panty liners, spermicides, condoms, biological washing powder and tight-fitting clothes.

Management

In most cases, it can be managed successfully. Treatments are often underused because of patient and clinician lack of knowledge of available treatments, embarrassment about initiating a discussion of symptoms and reluctance to initiate hormonal therapy.

A number of different treatments are available. These include vaginal lubricants and moisturisers, vaginal oestrogen and hormone replacement therapy (HRT).

The principles of management are:

- Restoration of urogenital physiology.
- Alleviation of symptoms.
Non-hormonal treatments

Personal lubricants and moisturisers can be effective at relieving discomfort and pain during sexual intercourse for women with mild to moderate vaginal dryness, particularly those who have a genuine contra-indication to oestrogen, or who choose not to use oestrogen\(^4\). Regular sexual activity can be beneficial for many women\(^5\).

Lubricants

- These provide short-term relief.
- They can improve dryness during intercourse.
- There is no evidence that they have any long-term beneficial therapeutic effects.
- Some are water based non-hormonal vaginal lubricants.
- Others are silicone based lubricants.

Moisturisers

- These are bio-adhesive so attach to mucin and epithelial cells on the vaginal wall and therefore retain water.
- They can also lower vaginal pH.
- Numerous preparations are available over the counter.
- They are non-hormonal vaginal moisturisers.
- Typical use might be one application (2.5 g) three times per week for an initial period of three months. It can be continued longer term if it is beneficial. It can be used more or less frequently, depending on the severity of the woman's dryness. It is safe to use daily.
- These should be used regularly rather than during sexual intercourse.
- NB: Vaseline® is not recommended. It can break down the latex in condoms or damage sex toys.

The efficacy of lubricants and moisturisers is generally lower than that with using topical oestrogens, although some experts believe that when they are applied on a regular basis then they have an efficacy comparable with that of local oestrogen therapy\(^5\).

Hormonal treatments

Topical and systemic oestrogens are the most efficacious treatments for atrophic vaginitis.

HRT

- Restores the vaginal pH.
- Works by thickening and revascularising the vaginal epithelium, so improving lubrication.
- Also helps to improve urinary symptoms.
- Systemic HRT is not usually recommended as first-line treatment for those women with only vaginal symptoms and no menopausal symptoms.
- Around 10-25% of women receiving HRT still have symptoms and so will require topical oestrogen in addition to HRT.

Topical treatments

see also separate HRT - Topical article.

- There are various preparations available, including rings, vaginal tablets and creams. These are all equally effective for treating vaginal atrophy.
- It is common to have more vaginal discharge with creams. This may be an advantageous side-effect in sexually active women.
- Individual preference is important when deciding on which type of topical treatment to prescribe.
- Topical HRT is sometimes used prior to prolapse repair surgery in postmenopausal women with evidence of epithelial atrophy.
- Vaginal oestrogens can be really effective in patients with urinary urgency, frequency or nocturia, urinary incontinence and recurrent UTIs\(^6\).
- There is no evidence that topical oestrogen causes endometrial proliferation after long-term use\(^3\).
- Low-dose topical oestrogen does not therefore need to be given with systemic progestogens.
- Long-term low-dose topical oestrogen is safe.

Most women will have relief from their symptoms after about three weeks of treatment. Maximal benefit usually occurs after 1-3 months but may take up to a year.

Women receiving hormonal treatment should all be advised to contact their doctor if they experience any vaginal bleeding.

If symptoms have not improved with hormonal treatment, then another underlying cause of the symptoms should be considered (eg, dermatitis, vulvodynia).

Prognosis

Symptoms are likely to return on cessation of treatment.
Further reading & references


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