



## Complete Summary

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### GUIDELINE TITLE

2002 national guideline on the management of vulvovaginal candidiasis.

### BIBLIOGRAPHIC SOURCE(S)

Association for Genitourinary Medicine (AGUM), Medical Society for the Study of Venereal Disease (MSSVD). 2002 national guideline on the management of vulvovaginal candidiasis. London: Association for Genitourinary Medicine (AGUM), Medical Society for the Study of Venereal Disease (MSSVD); 2002. Various p. [13 references]

## COMPLETE SUMMARY CONTENT

- SCOPE
- METHODOLOGY - including Rating Scheme and Cost Analysis
- RECOMMENDATIONS
- EVIDENCE SUPPORTING THE RECOMMENDATIONS
- BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
- IMPLEMENTATION OF THE GUIDELINE
- INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES
- IDENTIFYING INFORMATION AND AVAILABILITY

## SCOPE

### DISEASE/CONDITION(S)

Vulvovaginal candidiasis:

- Acute candidiasis
- Recurrent candidiasis

### GUIDELINE CATEGORY

Diagnosis  
 Evaluation  
 Management  
 Treatment

### CLINICAL SPECIALTY

Infectious Diseases  
 Obstetrics and Gynecology  
 Urology

## INTENDED USERS

Physicians

## GUIDELINE OBJECTIVE(S)

To present a national guideline for the management of vulvovaginal candidiasis

## TARGET POPULATION

Women in the United Kingdom with vulvovaginal candidiasis

## INTERVENTIONS AND PRACTICES CONSIDERED

### Diagnosis

1. Clinical evaluation (assess signs and symptoms)
2. Test pH of vaginal fluid
3. Microscopy, including gram stain of vaginal discharge, saline microscopy of vaginal discharge, 10% potassium hydroxide (KOH) microscopy of vaginal discharge, and latex agglutination slide of vaginal discharge
4. Culture using Sabouraud's media

### Treatment/Management

1. General advice to patient
2. Topical and oral azole therapies, including nystatin, clotrimazole, econazole, fenticonazole, isoconazole, miconazole, fluconazole, itraconazole, ketoconazole
3. Follow-up

## MAJOR OUTCOMES CONSIDERED

Clinical and mycological cure rate

## METHODOLOGY

### METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

### DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The guideline developers performed a Medline search using keywords "vulvo-vaginal candidiasis", "vaginal candidosis" (1980-2000), English language only. A Cochrane Library search was also performed using keywords "vulvo-vaginal candidiasis", "vaginal candidosis" (2000).

### NUMBER OF SOURCE DOCUMENTS

Not stated

## METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

### RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence:

I a

- Evidence obtained from meta-analysis of randomised controlled trials

I b

- Evidence obtained from at least one randomised controlled trial

II a

- Evidence obtained from at least one well designed controlled study without randomisation

II b

- Evidence obtained from at least one other type of well designed quasi-experimental study

III

- Evidence obtained from well designed non-experimental descriptive studies such as comparative studies, correlation studies, and case control studies

IV

- Evidence obtained from expert committee reports or opinions and/or clinical experience of respected authorities

## METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

### DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

## METHODS USED TO FORMULATE THE RECOMMENDATIONS

## Expert Consensus

### DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The revision process commenced with authors being invited to modify and update their 1999 guidelines. These revised versions were posted on the website for a 3 month period and comments invited. The Clinical Effectiveness Group and the authors concerned considered all suggestions and agreed on any modifications to be made.

### RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Grading of Recommendations:

A (Evidence Levels I a, I b)

- Requires at least one randomised controlled trial as part of the body of literature of overall good quality and consistency addressing the specific recommendation.

B (Evidence Levels II a, II b, III)

- Requires availability of well conducted clinical studies but no randomised clinical trials on the topic of recommendation.

C (Evidence Level IV)

- Requires evidence from expert committee reports or opinions and/or clinical experience of respected authorities.
- Indicates absence of directly applicable studies of good quality.

### COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

### METHOD OF GUIDELINE VALIDATION

External Peer Review  
Internal Peer Review

### DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The initial versions of the guidelines were sent for review to the following:

- Clinical Effectiveness Group (CEG) members
- Chairs of UK Regional GU Medicine Audit Committees who had responded to an invitation to comment on them
- Chair of the Genitourinary Nurses Association (GUNA)

- President of the Society of Health Advisers in Sexually Transmitted Diseases (SHASTD)
- Clinical Effectiveness Committee of the Faculty of Family Planning and Reproductive Health Care (FFP)

Comments were relayed to the authors and attempts made to reach a consensus on points of contention with ultimate editorial control resting with the Clinical Effectiveness Group. Finally, all the guidelines were ratified by the councils of the two parent societies.

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

Definitions of the levels of evidence (I-IV) and grades of recommendation (A-C) are repeated at the end of the "Major Recommendations" field.

#### Diagnosis

##### Clinical

The clinical symptoms caused by albicans and non-albicans species are indistinguishable.

##### Symptoms

- Vulval itching
- Vulval soreness
- Vaginal discharge
- Superficial dyspareunia
- External dysuria

##### Signs

- Erythema
- Fissuring
- Discharge, may be curdy (non-offensive)
- Satellite lesions
- Oedema

None of these symptoms or signs is specific for the diagnosis of candidiasis. Candidiasis is often diagnosed on the basis of clinical features alone and as many as half of these women may have other conditions--for example, allergic reactions (Level of Evidence: II. Grade of Recommendation A).

NB: 10% to 20% women during reproductive years may harbour *Candida* species in the absence of symptoms. These women do not require treatment.

##### Investigations

pH of vaginal fluid 4.0 to 4.5 (pH >5 suspect bacterial vaginosis/trichomoniasis).

### Microscopy

Gram stain of vaginal discharge collected from anterior fornix or lateral vaginal wall looking for spores/pseudohyphae. May detect 65% to 68% of symptomatic cases. (Emmerson et al., 1994; Sonnex & Lefort, 1999)

Saline microscopy of vaginal discharge collected from anterior fornix or lateral vaginal wall looking for pseudohyphae. Sensitivity 40% to 60%. (Sobel, 1997)

10% potassium hydroxide (KOH) microscopy of vaginal discharge collected from anterior fornix or lateral vaginal wall looking for pseudohyphae. Sensitivity 70%. (Sobel, 1997)

NB: KOH is toxic to *Trichomonas vaginalis*.

Latex agglutination slide technique of vaginal discharge collected from anterior fornix or lateral vaginal wall using polyclonal antibodies against *Candida* species. This confers no benefit over microscopy.

### Culture

Sabouraud's media

This should be considered in all symptomatic cases where microscopy is inconclusive or identification of the species would be helpful-for example, multiple previous treatments, concern about speciation (Sobel, 1997) (Level of Evidence: IV. Grade of Recommendation C).

### Management

#### General advice

Avoid local irritants--for example, perfumed products.

Avoid tight fitting synthetic clothing

(Level of Evidence: IV. Grade of Recommendation C).

### Treatment

All topical and oral azole therapies give an 80% to 95% clinical and mycological cure rate in acute vulvovaginal candidiasis in non-pregnant women. Nystatin preparations give a 70% to 90% cure rate under these circumstances (Reef et al., 1995) (Level of Evidence: II. Grade of Recommendation A).

#### Table 1. Topical therapies

| Drug            | Formulation         | Dosage Regimen     |
|-----------------|---------------------|--------------------|
| Clotrimazole*   | Pessary             | 500 mg stat.       |
| Clotrimazole*   | Pessary             | 200 mg x 3 nights  |
| Clotrimazole*   | Pessary             | 100 mg x 6 nights  |
| Clotrimazole*   | Vaginal cream (10%) | 5 g stat.          |
| Econazole**     | Pessary (Ecostatin) | 150 mg stat.       |
| Econazole**     | Pessary             | 150 mg x 3 nights  |
| Fenticonazole** | Pessary             | 600 mg stat.       |
| Fenticonazole** | Pessary             | 200 mg x 3 nights  |
| Isoconazole*    | Vaginal tablet      | 300 mg x 2 stat.   |
| Miconazole**    | Ovule               | 1.2 g stat.        |
| Miconazole**    | Pessary             | 100 mg x 14 nights |
| Nystatin        | Vaginal cream       | 4 g x 14 nights    |
| Nystatin        | Pessary             | 1-2 x 14 nights    |

\*Effect on latex condoms and diaphragms not known.

\*\*Product damages latex condoms and diaphragms.

Table 2. Oral therapies

| Drug         | Formulation | Dosage Regimen               |
|--------------|-------------|------------------------------|
| Fluconazole  | Capsule     | 150 mg stat.                 |
| Itraconazole | Capsule     | 200 mg twice daily for 1 day |

NB: Avoid in pregnancy/risk of pregnancy and breast feeding.

See British National Formulary.

(Level of Evidence: II. Grade of Recommendation A) (Reef et al., 1995; Watson et al., 2001; Odds, 1988)

### Pregnancy

Asymptomatic colonisation with *Candida* species is higher in pregnancy (30% to 40%).

Symptomatic candidosis is more prevalent throughout pregnancy.

Treatment with topical azoles is recommended. Longer courses may be necessary.

Oral therapy is contraindicated (Level of Evidence: II. Grade of Recommendation B). (Watson et al., 2001; Young & Jewell, 2000)

### Sexual partner(s)

There is no evidence to support treatment of asymptomatic male sexual partners (Level of Evidence: I. Grade of Recommendation A). (Bisschop et al., 1986)

### Follow up

Unnecessary if symptoms resolve. Test of cure is unnecessary.

Recurrent Candidosis

### Definition

Four or more episodes of symptomatic candidosis annually. (Centers for Disease Control and Prevention (CDC), 1998)

### Prevalence

Less than 5% of healthy women of reproductive years.

### Pathogenesis

- Poorly understood
- Exclude diabetes mellitus
- Association with recent cunnilingus (Hellberg et al., 1995)
- Other risk factors include underlying immunodeficiency, corticosteroid use, frequent antibiotic use

### Treatment

Regimens in current usage are empirical and are not based on randomised controlled trials. Principles of therapy include induction followed by a maintenance regimen for 6 months. Cessation of therapy may result in relapse in at least 50% of women.

## Regimens

Fluconazole 100 mg weekly for 6 months

Clotrimazole pessary 500 mg weekly for 6 months

Itraconazole 400 mg monthly for 6 months

[Ketoconazole 100 mg daily for 6 months

NB: Low risk of idiosyncratic drug induced hepatitis. Monitor liver function tests monthly]

(Level of Evidence: II. Grade of Recommendation B). (Sobel, 1997; Reef et al., 1995; CDC, 1998; Spinollo et al., 1997)

Caution: Anecdotal reports of oral contraceptive failure with prolonged oral azole therapy.

## Definitions:

Levels of Evidence:

I a

- Evidence obtained from meta-analysis of randomised controlled trials

I b

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II a

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## Grading of Recommendations:

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- Indicates absence of directly applicable studies of good quality.

## CLINICAL ALGORITHM(S)

None provided

## EVIDENCE SUPPORTING THE RECOMMENDATIONS

### REFERENCES SUPPORTING THE RECOMMENDATIONS

[References open in a new window](#)

### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is graded and identified for select recommendations (see "Major Recommendations").

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

Appropriate diagnosis, treatment and management of vulvovaginal candidiasis

### POTENTIAL HARMS

Recurrent candidosis. Anecdotal reports of oral contraceptive failure with prolonged oral azole therapy.

Treatment regimens for recurrent candidosis. Low risk of idiosyncratic drug induced hepatitis.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

The Clinical Effectiveness Group reminds the reader that guidelines in themselves are of no use unless they are implemented systematically. The following auditable outcome measures are provided:

- Offer microscopy/culture to all women with symptoms suggestive of vulvovaginal candidiasis. Target 100%.
- Initial diagnosis by microscopy of symptomatic culture proved vulvovaginal candidiasis in non-pregnant women. Target 50% to 60%.
- Cheapest acceptable topical/oral treatment option to be used in non-pregnant women. Target 80%.
- Asymptomatic male partners should not be treated. Target 100%.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Getting Better

### IOM DOMAIN

Effectiveness  
Patient-centeredness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

Association for Genitourinary Medicine (AGUM), Medical Society for the Study of Venereal Disease (MSSVD). 2002 national guideline on the management of vulvovaginal candidiasis. London: Association for Genitourinary Medicine (AGUM), Medical Society for the Study of Venereal Disease (MSSVD); 2002. Various p. [13 references]

### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

1999 Aug (revised 2002)

### GUIDELINE DEVELOPER(S)

British Association of Sexual Health and HIV - Medical Specialty Society

## SOURCE(S) OF FUNDING

Not stated

## GUIDELINE COMMITTEE

Clinical Effectiveness Group (CEG)

## COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Authors: David Daniels and Greta Forster

Clinical Effectiveness Group (CEG) Members: Keith Radcliffe (Chairman); Imtyaz Ahmed-Jushuf; Jan Welch; Mark FitzGerald; Janet Wilson

## FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Conflict of Interest: None

## GUIDELINE STATUS

This is the current release of the guideline. This guideline updates a previously released version.

An update is not in progress at this time.

## GUIDELINE AVAILABILITY

Electronic copies: Available in HTML format from the [Association for Genitourinary Medicine \(AGUM\) Web site](#). Also available in Portable Document Format (PDF) from the [Medical Society for the Study of Venereal Diseases \(MSSVD\) Web site](#).

## AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- UK national guidelines on sexually transmitted infections and closely related conditions. Introduction. Sex Transm Infect 1999 Aug; 75(Suppl 1): S2-3.

Electronic copies: Available in Portable Document Format (PDF) from the [Medical Society for the Study of Venereal Diseases \(MSSVD\) Web site](#).

The following is also available:

- Revised UK national guidelines on sexually transmitted infections and closely related conditions 2002. Sex Transm Infect 2002; 78: 81-2

Print copies: For further information, please contact the journal publisher, [BMJ Publishing Group](#).

## PATIENT RESOURCES

None available

## NGC STATUS

This summary was completed by ECRI on June 15, 2000. The information was verified by the guideline developer on October 13, 2000. This summary was updated by ECRI on June 24, 2002.

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Date Modified: 11/15/2004

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