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Recurrent vulvovaginal candidiasis

Current management

Background
Management of recurrent vulvovaginal candidiasis can be problematic, and current guidelines are limited by scant evidence.

Method
The authors found no research on how clinicians manage this condition and whether existing guidelines were followed. To ascertain how recurrent vulvovaginal candidiasis is managed in current clinical practice, a survey was conducted of delegates at a seminar for health professionals with a special interest in vulval conditions.

Results
Of the 160 delegates 66 completed the survey, providing a response rate of 41%. The authors found little adherence to current guidelines – only 50% reported using the recommended suppression and maintenance therapy, and only 57% reported using confirmatory diagnostic testing.

Discussion
The wide variation in health professionals' management of recurrent vulvovaginal candidiasis reflects the difficulty in treating and managing this condition. The results suggest that clinicians are 'tailoring' treatment to their patients due to a lack of good evidence of effective treatments to guide them.

Keywords: questionnaires; practice guidelines as topic; treatment failure; recurrence; candidiasis, vulvovaginal

Vaginitis is one of the most common reasons for women to access healthcare, and results in significant personal cost and morbidity, as well as cost to the health dollar.[1] Treatment of uncomplicated vulvovaginal candidiasis, which affects around 75% of women at some stage of their lives,[2] is well supported by evidence and results in few long term sequelae. However, recurrent vulvovaginal candidiasis, which has been defined as four or more episodes of vulvovaginal candidiasis in 12 months,[2] affects around 5–8% of women of reproductive age,[2] and often has a severe impact on the lives of sufferers. Successful management of this condition is problematic, yet recurrent vulvovaginal candidiasis is the subject of relatively few quality randomised controlled trials, and there are currently no supporting systematic reviews. Although widely used to inform management in Australia, the Therapeutic Guidelines[3] concede that consensus on management of this condition is not decisive.

Current national and international guidelines for recurrent vulvovaginal candidiasis include obtaining accurate diagnosis and using suppression and maintenance (oral or vaginal) therapy. This involves initially high doses of antifungal agents (usually) for 2 weeks, followed by long term weekly or monthly therapy (*Table 1*).[3,4] This treatment is expensive, costing patients up to $900 for 6 months, and 50% of women experience recurrence within 6 months of cessation of recommended maintenance treatment.[5]

The authors aimed to describe how recurrent vulvovaginal candidiasis is managed by health practitioners who have a special interest in vulval conditions.

Method

The participant sample was a group of health professionals attending a vulval disease seminar.

Delegates were invited to complete a brief, anonymous survey. Using free text they were asked to describe their management of the most recent patient they had treated for recurrent vulvovaginal candidiasis. They were asked to list any investigations ordered and specify dose and duration of any medications prescribed, as well as list any other advice they gave.

Table 1. Therapeutic Guidelines recommended management of recurrent vulvovaginal candidiasis[3]

Induce symptom remission with continuous antifungal treatment and use:

- a vaginal imidazole (eg. clotrimazole 1%) or nystatin, intravaginally, at night

  OR
- fluconazole 50 mg orally, once daily

  OR
- itraconazole capsules 100 mg orally, once daily

The time to achieve remission of symptoms varies from 2 weeks to 6 months

Maintain remission with interval therapy – the treatment interval varies from weekly to monthly (eg. premenstrually) depending on response. A suitable weekly regimen is:

- fluconazole 150–300 mg orally, weekly

  OR
- itraconazole capsules 100–200 mg orally, weekly

  OR
- clotrimazole 500 mg pessary intravaginally, weekly

  OR
- nystatin 100 000 units/5 g vaginal cream one applicator intravaginally, weekly

Ethics approval was obtained from the University of Melbourne.

Results

The seminar was attended by 160 health professionals: 66 completed the survey, a response rate of 41%. Characteristics of the respondents are shown in *Table 2*.

There was great variety in the method of management of recurrent vulvovaginal candidiasis among respondents – 30 different regimens were described. Treatment with oral azoles was most common (recommended by 23 clinicians). Other recommended treatments included topical (n=12); a combination of oral and intravaginal azoles and polyenes (n=15); and boric acid suppositories (n=2). Three clinicians reported prescribing antifungals, without specifying whether the recommended administration was oral or vaginal.

Fluconazole was the most common medication prescribed in the sample (n=33). However, the doses prescribed varied widely. For example, some clinicians prescribed 50 mg per week, others 150 mg per day for up to 3 weeks. Others treated with longer term doses, either weekly or monthly, and some used decreasing doses. Four participants did not specify doses, a further four treated with a single dose of fluconazole 150 mg. Eight clinicians used ketoconazole, with variations such as 200 mg/day for 5 days, to be repeated every month; and 100–200 mg/day for an unspecified period of time. Itraconazole daily was also prescribed by six clinicians in varying doses. Three clinicians did not answer this question.

Suppression and maintenance therapy was reported to be used by 50% of respondents, 58% reported using a diagnostic swab to confirm the condition, and 32% reported using both suppression and maintenance therapy as well as taking or accessing results of the diagnostic swab. A summary of results is shown in *Table 3*, however, because of the complexity of the answers recorded, it was not possible to show in detail each health practitioner's response in a table.

Table 2. Characteristics of survey respondents (n=66)

Gender*			Experience (years) in vulval disorders		
	Male	Female	None	<2 years	>2 years
Obstetrician and gynaecologist	14	23	0	7	32
General practitioner*	0	12	1	2	10
Dermatologist*	0	7	0	0	8
Sexual health physician	0	4	0	0	2
Nurse	0	1	0	0	1
Acupuncturist	0	1	0	0	1
Obstetrician and gynaecologist trainee	0	1	1	0	0
Physiotherapist*	0	0	0	0	1
Total	14	49	2	9	55

* One missing response in each gender group

Discussion

The difficulty in management of recurrent vulvovaginal candidiasis is reflected in the wide variation of practice of the health professionals surveyed.

Suppression and maintenance therapy, which is the current recommended treatment, was reported to be used by 33 (50%) clinicians (*Table 1* shows recommended guidelines). No respondent followed the guidelines exactly. However, many chose a range of doses and schedules not listed in the guidelines that fitted in with Therapeutic Guidelines' suggestion to follow the broad principles of management,[3] ie. suppressing symptoms through long term antifungal medication use.

Several respondents (n=11) used decreasing doses. A recent randomised control trial showed success in maintenance therapy using decreasing doses,[5] but this did not follow women after treatment had ceased, so whether it is more successful in preventing recurrence was not established.

Ketoconazole was the drug of choice for 12% of clinicians (n=8), all with 2 or more years experience with recurrent vulvovaginal candidiasis. Ketoconazole has a greater potential for harm than the more modern triazoles. Sobel[2] comments that due to the better safety of fluconazole, ketoconazole is rarely used.

Variations in treatment regimens may reflect the clinician's experience in management, previous poor outcomes with recommended regimens or patients' preferences. The high cost of oral azoles may also be prohibitive to some patients, and it is possible that treatment regimens may be altered by clinicians to fit in with patients' budgets. Ketoconazole is available on the Pharmaceutical Benefits Scheme (PBS) with authority, and is indicated for deep mycosis where other therapies have failed, making it a less expensive option than other oral azoles. This may account for its inclusion in management in this sample. Modern triazoles such as fluconazole and itraconazole are available (on the PBS) only with Authority, and neither is indicated for recurrent vulvovaginal candidiasis, thus a private (more costly) prescription is needed.

The clinicians who did not use suppression and maintenance therapy include the physiotherapist (n=1), acupuncturist (n=1) and nurse (n=1). It was not clear why 19% of clinicians did not use suppression and maintenance therapy in their management.

Just over half of respondents (58%) reported taking a vaginal swab or accessing previous results, despite the recommendations stating specification of candida type is needed to effectively treat different species.[2,6] Confirming diagnosis mycologically is necessary as self diagnosis is notoriously inaccurate – reported to be around 29% in one study.[7] Using diagnostics along with suppression and maintenance therapy was reported by only 21 (32%) of respondents.

Study limitations

The application of our findings to broader practice is not known, however, this sample would be expected to be better informed in treating recurrent vulvovaginal candidiasis than the average practitioner. Response rate may have been affected by lack of incentives offered. Low response rate and recall bias as well as convenience sampling are other possible limitations.

Table 3. Reported method of treatment of last patient seen with recurrent vulvovaginal candidiasis (n=66)

Summary of reported method of management	n (%)
Reported diagnostic testing or access of results	38 (58)
Reported use of suppression and maintenance therapy	33 (50)
Reported use of suppression and maintenance therapy plus diagnostic swab	21 (32)
Reported first line treatment	
Reported oral therapy only (fluconazole/itraconazole/ketoconazole)	23 (35)
Oral and vaginal treatment (oral plus pessary/cream)	20 (30)
Vaginal treatment only (clotrimazole/miconazole/nystatin)	9 (14)
Boric acid (with/ without other treatment)	4 (6)
Skin care	2 (3)
Referral and skin care (with no antifungal treatment)	1 (2)
Physiotherapy (with no antifungal treatment)	1 (2)
Dietary measures (with no antifungal treatment)	1 (2)
Diagnostic swab (with no antifungal treatment)	1 (2)
Cease all treatment (with no antifungal treatment)	1 (2)
Not answered	3 (5)
Total	66
Additional treatment, investigations or advice offered	
Skin care/hygiene	13 (20)
Clothing advice (eg. wear cotton underwear)	8 (12)
Cease/change oral contraceptives	5 (8)
Probiotics including lactobacillus	4 (6)
Random plasma glucose	4 (6)
Aqueous cream	3 (5)
Hydrozole cream/hydrocortisone 1%	3 (5)
Partner treatment	3 (5)
Dietary advice	3 (5)
Yoghurt (oral or vaginal)	3 (5)
Boric acid	2 (3)
Aci-gel	2 (3)
Kenacomb ointment	2 (3)
Vinegar douches	2 (3)
Liver function tests	1 (2)
Itraconazole	1 (2)
Naturopathic tonics	1 (2)
Vaseline	1 (2)
Betadine paint	1 (2)
Reduce weight	1 (2)

Conclusion

Although current guidelines for recurrent vulvovaginal candidiasis are based on best available evidence or professional consensus, high relapse rates at 6 months persist. This may explain the wide variation in management practices found in the survey. Lack of confidence in the guidelines may be a reason for the inconsistency of management.

Speciation of candida is recommended in order to inform management and to exclude other conditions, yet this was done infrequently among this sample. Without good evidence of effective treatments to guide them, clinicians are 'tailoring' treatment for patients, possibly based on their own and their patients' experiences and preferences. An effective, consistent approach to management of this condition provides future challenges and research opportunities.

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