

Treatment of vaginal candidosis with a single 500-mg clotrimazole pessary

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SUMMARY In a double-blind study the therapeutic efficacy of a single 500-mg clotrimazole pessary was compared with that of a 200-mg clotrimazole pessary inserted once daily for three days in 72 patients with vaginal candidosis confirmed by culture. On clinical assessment four weeks after completion of treatment with the single-dose pessary the cure rate was 86% compared with 92% after the three-day regimen. There was no significant difference in the eradication rate between the single-dose (94%) and three-day regimens (89%). Four weeks after completion of treatment the recurrence rates by culture were 18% with the single-dose and 24% with the three-day regimen. The former treatment was well tolerated and as effective as the three-day clotrimazole regimen.

Introduction

Clotrimazole, one of the imidazole antimycotics, in a dosage of 100 mg given for six days was found to be effective in the treatment of vaginal candidosis.¹ Shorter periods of treatment of four² or three^{3,4} days did not affect the efficacy of the treatment. Clotrimazole is fungicidal in vaginal secretions at a concentration of $>10 \mu\text{g/ml}$ ⁵ and remains at this concentration for 72 hours after insertion of one 500-mg clotrimazole pessary (Ritter *et al*, unpublished data). We evaluated, therefore, the therapeutic efficacy and local tolerance of a single 500-mg clotrimazole pessary for the treatment of vaginal candidosis.

Patients and methods

Women with all the following criteria for vaginal candidosis were included in the study: (a) symptoms of irritation, burning, and vaginal discharge; (b) signs of inflammation of the vaginal mucosa and microscopical identification of pseudohyphae; and (c) cultural isolation of *Candida albicans*.

The culture specimens were promptly inoculated on to standard media and growing yeasts were identified as *C. albicans* by the formation of

chlamydo-spores and the germ tube test. Pregnant patients and those who had received antifungal or antitrichomonal treatment during the previous two weeks were excluded. Treatment with hormones or antibiotics, the use of an intrauterine contraceptive device, any previous treatment for vaginal candidosis, and the presence or absence of vulvitis (defined as irritation, swelling, and redness of the vulva) were recorded.

Cultures for *Neisseria gonorrhoeae* and *Chlamydia trachomatis* and microscopical examination to exclude *Trichomonas vaginalis* were performed before the patient started treatment.

TREATMENT

Patients were supplied with a plain numbered pack containing three pessaries marked day 1 to day 3. Each pack contained either one clotrimazole (500 mg) pessary plus two placebo pessaries or three clotrimazole (200 mg) pessaries. The active and placebo pessaries were indistinguishable. The containers were prepacked and randomised so that neither the clinician, the mycologist, nor the patient knew which treatment was being given. The first pessary was inserted at the completion of the gynaecological examination by one of us. The remaining pessaries were inserted once daily by the patient from the following night. Patients with vulvitis were also given clotrimazole cream and instructed to apply it to the vulva. No attempt was made to treat the sexual partner.

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FOLLOW UP

Patients were examined one and four weeks after the completion of treatment. At each follow up, the clinical symptoms were recorded using a three-point severity scale (0 = none, 1 = moderate, 2 = severe). A high vaginal swab was taken and examined with a light microscope for pseudohyphae and by culture for *Candida* species.

STATISTICAL ANALYSIS

The results of the two treatment regimens were compared using the χ^2 test with Yates's correction (significance, $P < 0.05$).

Results

As treatment was started before mycological confirmation it was necessary to exclude seven women with negative culture results for *Candida* and one with positive culture results for both *C. albicans* and *C. trachomatis*. None of the patients had gonorrhoea as judged by culture samples from the cervix, urethra, and rectum. Seventy-two patients, ranging in age from 16-56 years, satisfied the criteria for inclusion and subsequently completed the trial. The characteristics of the two groups were similar (table I). The severity of clinical symptoms and signs are shown in table II.

TABLE I Comparison of patients treated with either a single 500-mg clotrimazole pessary (group 1) or a 200-mg clotrimazole pessary for three days (group 2)

	Group 1 (n = 35)	Group 2 (n = 37)
Age (years, mean \pm SD)	27.4 \pm 7.6	29.0 \pm 6.9
Previously treated for vaginal candidosis	18	19
Vulvitis	33	35
Antibiotic treatment in month before trial	1	0
Contraceptive pill	15	15
Other hormone treatment (for example, oestrogen)	1	1
Intrauterine contraceptive device	8	8

n = No of patients treated; SD = standard deviation

TABLE II Total symptom score in the two treatment groups before and one and four weeks after completion of treatment

Symptoms	Severity of symptoms*					
	Group 1† (n = 35)			Group 2† (n = 37)		
	Pretrial	1 week after	4 weeks after	Pretrial	1 week after	4 weeks after
Itching	69	2	7	73	5	7
Burning	63	0	1	68	1	5
Discharge	59	1	1	61	3	4

* Severity scale: 0 = none, 1 = moderate, 2 = severe

† Group 1: treated with a single 500-mg clotrimazole pessary; group 2: treated with a 200-mg clotrimazole pessary for three days

n = No of patients treated

CURE RATES

One week after completing treatment one patient in each of the two groups had signs and symptoms of vaginal candidosis (table III). They were retreated with 100-mg clotrimazole pessaries for six days. Four weeks later both patients were free of symptoms and culture results for *C. albicans* were negative.

TABLE III Patients with positive culture results for *C. albicans* or signs and symptoms of infection one week and four weeks after completion of treatment

	Results after completion of treatment (weeks):			
	Group 1* (n = 35)		Group 2* (n = 37)	
	1	4	1	4
Positive culture result	2	6	4	8
Clinical signs and symptoms	1	5	1	3

* Group 1: treated with a single 500-mg clotrimazole pessary; group 2: treated with a 200-mg clotrimazole pessary for three days.

Four weeks after completing treatment five patients who had received a single 500-mg clotrimazole pessary and three the three-day regimen had signs and symptoms of vaginal candidosis (table III). This gave a cure rate of 85.7% four weeks after completion of the single-dose regimen and 91.9% for the patients given the three-day regimen. The difference in cure rates was not statistically significant ($\chi^2_1 = 0.21$, $P > 0.05$).

ERADICATION RATE

The eradication rate, based on a negative culture result for *C. albicans*, seven days after treatment with a single clotrimazole pessary was 94.3% and that for the three-day regimen 89.2% (table III). The difference in eradication rates was not statistically significant ($\chi^2_1 = 0.13$, $P > 0.05$).

RECURRENCE RATE

Four weeks after completion of treatment the recurrence rate, as judged by culture, was 18.2% with

the single-dose regimen and 24.2% with the three-day regimen (table III). The difference in recurrence rates was not statistically significant ($\chi^2 = 0.09$, $P > 0.05$). None of the patients treated reported any side effects.

Discussion

Treatment of vaginal candidosis with a single 500-mg clotrimazole pessary was found to be as effective as previous treatment regimens of longer duration.^{2 3 7} In the present investigation over 50% of the patients had been treated previously for vaginal candidosis, many several times each year. The duration and nature of the treatment is of special importance to women who have experienced repeated episodes of vaginal candidosis. Treatment with a single 500-mg clotrimazole pessary is an effective, simple, and acceptable regimen. The pessary can be inserted

during the patient's clinic attendance as soon as the diagnosis is confirmed, which removes the problem of patient compliance and offers maintained efficacy and maximum acceptability.

References

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