

# Endometrium is not a reservoir for recurrent vaginal candidiasis

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## Summary

The aim of this study was to determine whether the endometrium acts as a reservoir for *Candida albicans* in cases of recurrent vaginal candidiasis. Twenty-five women with documented history of recurrent vaginal candidiasis were enrolled in the study and endometrial samples were cultured for *Candida albicans*. Only two patients had positive cultures for *Candida albicans*. Therefore, we concluded that the endometrium is not a common reservoir for *Candida albicans*.

**Key words:** Recurrent vaginal candidiasis; Endometrium.

## Introduction

It has been estimated that 75% of women will have at least one episode of vaginal candidiasis during their child-bearing age and about 5% of adult women will have recurrent episodes of vaginal candidiasis [1]. Humidity, hormonal influences, pregnancy, diabetes mellitus, immunosuppression and prolonged use of antibiotics are common predisposing factors to vaginal candidiasis [2]. Careful evaluation of women with recurrent vaginal candidiasis usually does not show any precipitating or casual mechanism [3]. Vaginal reinfection from a rectal focus has been alleged but simultaneous treatment with systemic antifungal agents does not significantly lower recurrence [4, 5]. Usually the recurrence occurs pre- and perimenstrually [6]. In this study we sought to determine whether the endometrium acts as a reservoir for *Candida albicans* (*C. albicans*) which is carried into the vagina during menstruation and causes recurrent vaginal candidiasis.

## Materials & Methods

Twenty-five patients with the diagnosis of vaginal candidiasis who failed the initial treatment with 500 mg single dose of vaginal clotrimazole were enrolled in this study. All the patients had a documented history of recurrent vaginal candidiasis.

High vaginal, endocervical, and rectal swabs were taken for candida and the endometrium was aspirated with a Pipelle after vaginal irrigation with saline. All the specimens were inoculated onto culture plates of Subouraud's dextrose agar. All the plates were incubated at 37 °C for 48 hours and the growth was graded from + to +++.

## Results

The results of *C. albicans* detection in rectal, high vaginal, endocervical swabs and endometrial aspirate in 25 women are shown in Table 1. In five patients *C. albicans* was detected in rectal specimens whereas only two patients had positive endometrial cultures for *C. albicans*.

Table 1. — Results of *C. albicans* detection in rectal, vaginal, endocervical swabs and endometrial aspirate

Patient	Rectal	Vaginal	Endocervical	Endometrial
1	—	++	++	—
2	—	+	+	—
3	—	++	+	—
4	—	++	+	—
5	++	+++	++	—
6	—	+	—	—
7	—	++	+	—
8	++	+++	++	++
9	—	++	+	—
10	—	+	+	—
11	—	++	++	—
12	—	++	+	—
13	—	+	+	—
14	—	+	—	—
15	+	+++	++	—
16	—	+	+	—
17	—	++	+	—
18	—	++	+	—
19	—	++	++	—
20	—	+	+	—
21	+	+++	++	—
22	—	+++	+++	++
23	+	+	+	—
24	—	++	+	—
25	—	+	—	—

## Discussion

Recurrent candidal vaginosis is a major problem, and evaluation of women with recurrent vaginitis usually does not show any precipitating or causal mechanism [3]. The intestinal reservoir hypothesis which is based on recovery of *Candida* species from rectal specimens in women with vaginal candidiasis has not been proven. Oral nystatin treatment, which reduces intestinal yeast carriage, did not prevent symptomatic recurrence of

vaginal candidiasis [7]. Sexual transmission is another hypothesis, yet no single controlled study has shown that the treatment of sexual partners prevents recurrences in women [7]. Since the recurrences usually occur pre- and postmenstrually [6], we sought to determine whether the endometrium acts as a reservoir for *Candida albicans* (*C. albicans*) which is carried into the vagina during menstruation and causes recurrent vaginal candidiasis. Our results showed that the endometrium is not a common reservoir for candida species in patients with recurrent vaginal candidiasis. Only two patients had positive endometrial cultures for *C. albicans*; one patient had positive rectal, vaginal, endocervical and endometrial cultures and the other had positive vaginal, endocervical and endometrial cultures. In both patients vaginal growth cultures were grade +++ whereas the endometrial ones were ++.

In conclusion, in cases of recurrent vaginal candidiasis, the endometrium is not a common reservoir of *C. albicans*.

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