

Letters to the Editor

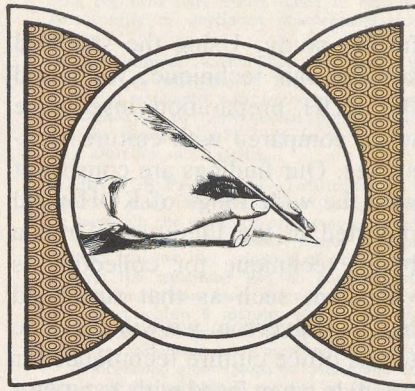
The Journal welcomes Letters to the Editor; if found suitable, they will be published as space allows. Letters should be typed double-spaced, should not exceed 400 words, and are subject to abridgment and other editorial changes in accordance with journal style.

Diagnosis of Candida Vaginitis

To the Editor:

The development of sensitive and specific techniques for the diagnosis of *Candida* vaginitis would be of great benefit to the practicing physician. Bergman et al (*Bergman JJ, Berg AO, Schneeweiss R, Heidrich FE: Clinical comparison of microscopic and culture techniques in the diagnosis of Candida vaginitis. J Fam Pract 1984; 18:549-552*) have provided a step in that direction, but some concerns about their work remain.

For laboratory tests to be meaningful for a practitioner, he must be aware of the incidence of positive tests in the asymptomatic population. If the false-positive rate is very high, the information obtained from the test will be very low. In their study Bergman et al grouped 204 women with numerous complaints, including many that were asymptomatic, into the same diagnostic category. Therefore, it is very difficult to determine the meaning of a positive culture. Ideally, one would compare the rates of positive cultures in a symptomatic and an asymptomatic group to determine whether the culture had any discriminating



value. Then one would need to treat the symptomatic patients who had a positive culture to determine whether the tests aid the effectiveness of care. None of this information is available in the above study. In addition, the authors do not make clear the central point that all the positives on the Microstix and Nickerson's media were also positive on the Sabouraud agar.

A final point of confusion concerns the flow diagram on diagnosing *Candida* vaginitis. In the second paragraph of the article the authors say, "there are probably few, if any, symptoms that accurately predict *Candida* infection." We are instructed on the flow diagram, however, to culture patients with a negative KOH preparation who have symptoms and examinations suggestive of *Candida* vaginitis. These two ideas seem to be somewhat contradictory in nature.

I appreciate the work of Bergman et al in trying to improve the criteria for diagnosing *Candida* vaginitis. Further research in this area will be a great service.

William H. Bayer, MD
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Family Practice Residency
of Southwest Idaho
Boise, Idaho

To the Editor:

I read with interest the article by Bergman et al (*Clinical comparison of microscopic and culture techniques in the diagnosis of Candida vaginitis. J Fam Pract 1984; 18:549-552*). I was intrigued because of the demonstration of poor sensitivity and poor predictive value of the KOH preparation for evaluation of *Candida* vaginitis. My clinical experience has been that I rarely encounter a negative KOH preparation in a patient with symptoms and signs suggestive of *Candida* vulva vaginitis. I tried to analyze the differences in our techniques.

I noted that a nurse practitioner used a cotton swab to swab the lateral vaginal wall in preparation of the KOH smear. Several years ago, perhaps by serendipity, I began using a wooden Pap smear speculum to scrape rather firmly the lateral vaginal wall in search of monilial hyphae. Since I began that technique, I have again found that my suspicion by history and physical examination is most frequently well correlated with results from the KOH preparation. It has been my unstudied hypothesis that hyphal elements are somewhat attached to the superficial epithelium and the detachment of some epithelial cells increases the yield of my KOH prep. I have tested this technique using the model of thrush in infants. I find when I swab obvious thrush lesions with a cotton swab, I find fewer hyphae than if I scrape with a wooden Pap smear spatula.

I must also admit that I feel my experience of looking at numerous KOH preparations has increased my ability to detect the hyphal elements. There was no mention in the article about the experience of the nurse practitioners who performed this test. I am certain that research-

ers are reluctant to accept the experience anecdotes of a practicing physician; however, I believe the results of this study are suspect.

Larry W. Halverson, MD
Aurora, Missouri

To the Editor:

In the recent paper by Bergman et al the authors failed to break down their data according to two subgroups of their population, ie, those women who were symptomatic for vaginitis and those women who were not. There is little question in my mind that there are many women who harbor *Candida* in their vaginal canal without having vaginal symptoms. It is possible that this subgroup of women accounted for much of the increased sensitivity of culture media over KOH examination. I would be interested in knowing the relative sensitivities of KOH examination in culture media in women with symptoms of vaginitis as opposed to women who may only be colonized with *Candida* and, hence, require no treatment at all.

Edward J. Miron, MD
Calhoun, Georgia

The preceding letters were referred to Dr. Bergman, who responds as follows:

Drs. Halverson and Miron raise several interesting points.

Dr. Halverson's technique for collecting specimens of vaginal discharge is innovative and deserves

further study. Using the standard cotton-swab technique, we found the KOH preparation insensitive when compared with culture techniques. Our findings are consistent with the wide range of KOH yield reported in the literature. Until a better technique for collection is validated, such as that suggested by Dr. Halverson, we will continue to use office culture techniques for *Candida* when faced with a symptomatic woman and a negative KOH preparation.

In response to Dr. Miron, we found vaginal *Candida* in 11 percent of asymptomatic women,¹ comparable to previous published reports. Since no combination of symptoms or signs of vaginitis reliably predicted positive *Candida* cultures, we did not present KOH results subdivided by symptoms. Thus, our clinical recommendation is that a patient presenting with symptoms suggesting *Candida* vaginitis should have a culture performed if the KOH is negative. A "carrier" of *Candida* may or may not have symptoms; the *Candida* culture can then be completed while other causes are simultaneously entertained.

James J. Bergman, MD
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Reference

1. Bergman JJ, Berg AO: How useful are symptoms in the diagnosis of *Candida* vaginitis? *J Fam Pract* 1983; 16:509-511

(Continued from adjacent page)

Nursing Mothers: Captopril is secreted in human milk. Exercise caution when administering captopril to a nursing woman, and, in general, nursing should be interrupted.

Pediatric Use: Safety and effectiveness in children have not been established although there is limited experience with use of captopril in children from 2 months to 15 years of age. Dosage, on a weight basis, was comparable to that used in adults. Captopril should be used in children only if other measures for controlling blood pressure have not been effective.

ADVERSE REACTIONS: Reported incidences are based on clinical trials involving about 4000 patients.

Renal—One to 2 of 100 patients developed proteinuria (see WARNINGS). Renal insufficiency, renal failure, polyuria, oliguria, and urinary frequency in 1 to 2 of 1000 patients.

Hematologic—Neutropenia/agranulocytosis occurred in about 0.3% of captopril treated patients (see WARNINGS). Two of these patients developed sepsis and died.

Dermatologic—Rash (usually mild, maculopapular, rarely urticarial), often with pruritus and sometimes with fever and eosinophilia, in about 10 of 100 patients, usually during the 1st 4 weeks of therapy. Pruritus, without rash, in about 2 of 100 patients. A reversible associated pemphigoid-like lesion, and photosensitivity have also been reported. Angioedema of the face, mucous membranes of the mouth, or of the extremities in about 1 of 100 patients—reversible on discontinuance of captopril therapy. One case of laryngeal edema reported. Flushing or pallor in 2 to 5 of 1000 patients.

Cardiovascular—Hypotension in about 2 of 100 patients. See WARNINGS (Hypotension) and PRECAUTIONS (Drug Interactions) for discussion of hypotension on initiation of captopril therapy. Tachycardia, chest pain, and palpitations each in about 1 of 100 patients. Angina pectoris, myocardial infarction, Raynaud's syndrome, and congestive heart failure each in 2 to 3 of 1000 patients.

Dysgeusia—About 7 of 100 patients developed a diminution or loss of taste perception; taste impairment is reversible and usually self-limited even with continued drug use (2 to 3 months). Gastric irritation, abdominal pain, nausea, vomiting, diarrhea, anorexia, constipation, aphthous ulcers, peptic ulcer, dizziness, headache, malaise, fatigue, insomnia, dry mouth, dyspnea, and paresthesias reported in about 0.5 to 2% of patients but did not appear at increased frequency compared to placebo or other treatments used in controlled trials.

Altered Laboratory Findings: Elevations of liver enzymes in a few patients although no causal relationship has been established. Rarely cholestatic jaundice and hepatocellular injury with secondary cholestasis have been reported. A transient elevation of BUN and serum creatinine may occur, especially in volume-depleted or renovascular hypertensive patients. In instances of rapid reduction of longstanding or severely elevated blood pressure, the glomerular filtration rate may decrease transiently, also resulting in transient rises in serum creatinine and BUN. Small increases in serum potassium concentration frequently occur, especially in patients with renal impairment (see PRECAUTIONS).

OVERDOSAGE: Primary concern in correction of hypotension. Volume expansion with an I.V. infusion of normal saline is the treatment of choice for restoration of blood pressure. Captopril may be removed from the general circulation by hemodialysis.

DOSAGE AND ADMINISTRATION: CAPOTEN should be taken one hour before meals. Dosage must be individualized; see DOSAGE AND ADMINISTRATION section of package insert for detailed information regarding dosage in hypertension and in heart failure. Because CAPOTEN (captopril) is excreted primarily by the kidneys, dosage adjustments are recommended for patients with impaired renal function. **Consult package insert before prescribing CAPOTEN (captopril).**

HOW SUPPLIED: Available in tablets of 25, 50, and 100 mg in bottles of 100, and in UNIMATIC® unit-dose packs of 100 tablets.