

# Clinical Quiz

**Paul Fischer, MD, Augusta, Georgia**

DOI: <http://dx.doi.org/10.5915/21-4-13508>

The patient is a 19 year old female who has been in generally good health. She was seen in the past for birth control and once for cystitis. She now presents with a two day history of heavy vaginal discharge. This is slightly irritating but not itchy and does not have a bad odor. She admits to one regular sexual partner at this time but has had several others in the past. She has not douched nor used any intravaginal medication.

**Physical Examination:**

The patient had no abdominal tenderness. The ex-

ternal labia and vaginal mucosa were mildly erythematous. The cervix was normal in appearance and was nontender. A moderate amount of creamy discharge was present. The bimanual examination was unremarkable.

**Laboratory Findings:**

A saline wet prep of the discharge showed the findings seen in Figure 1. What is your diagnosis?

For the correct diagnosis see the next page.



**Figure 1.** 40x magnification of a saline vaginal wet prep from a patient with an irritating vaginal discharge. The arrow indicates the etiologic organism.

*From the Department of Family Medicine  
Medical College of Georgia  
Augusta, GA 30912*

# Leptothrix

## in association with Trichomonas vaginitis

### Discussion

An examination of the vaginal specimen is the key step in diagnosing the reason for vaginitis. The "classic", historical, or physical examination findings are often missing in cases of *Candida*, *Gardnerella*, or *Trichomonas* vaginitis. Many times, there are more than one infecting organism. Therefore, one must always do a vaginal wet prep.

The long, thin organisms seen in Figure 1 are often confused with *Candida*. They are *Leptothrix*. This organism can be differentiated from *Candida* because it is not branching and has a thinner, finer, form. *Leptothrix* is always seen in patients who also have *Trichomonas*, so use it as a marker to look closer for *Trichomonads*. It is unclear whether this is a co-pathogen, but follow-up wet preps after treatment with metronidazole show that the *Leptothrix* is

gone.<sup>1</sup>

In addition to *Leptothrix*, this patient also has a *Gardnerella* infection. This can be identified by the slight "clueing" of the squamous cells as well as the presence of the small, cocco-bacilli in the background of the figure.

Figure 2 is a vaginal wet prep with *Candida*. Note the thick walls of this organism. Both sides of the wall can be clearly identified. Also, note the yeast buds and the branching of the organism. It has a "heavier" appearance than the delicate appearance of *Leptothrix*.

### References:

1. Fischer PM, Addison LA, Curtis P, Mitchell JM: *The Office Laboratory*. Appleton-Lange, East Norwalk, CT, 1983.

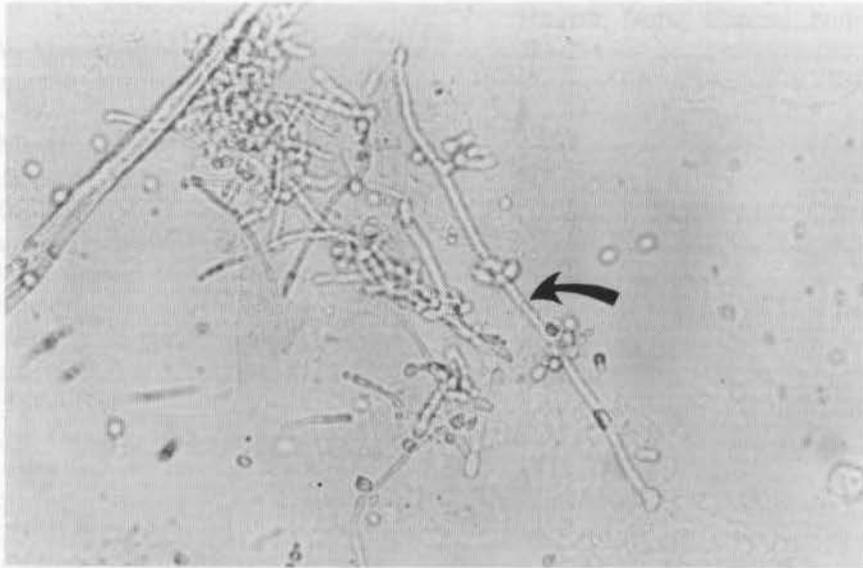


Figure 2. A vaginal wet prep from a patient with *Candida* vaginitis. The arrow indicates the typical appearance of the organism.