

Laboratory Quiz

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Case History

A 25-year-old white female presents at your office complaining of a foul smelling vaginal discharge for about two weeks. She has also had some minimal dysuria. She denies previous problems with genital-urinary infections. She is married, on birth control pills and has never been pregnant.

On pelvic examination, there was a watery discharge but no evidence for mucosal inflammation and no discharge from the cervical os. A bimanual examination was normal.

A wet prep examination was done. The findings of this test are illustrated in Figure 1.

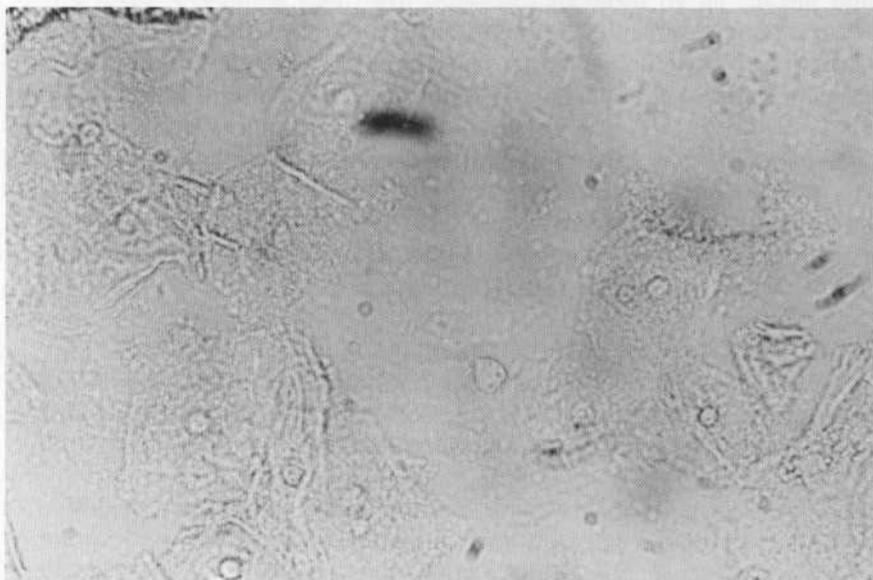


Figure 1: Vaginal wet prep findings.

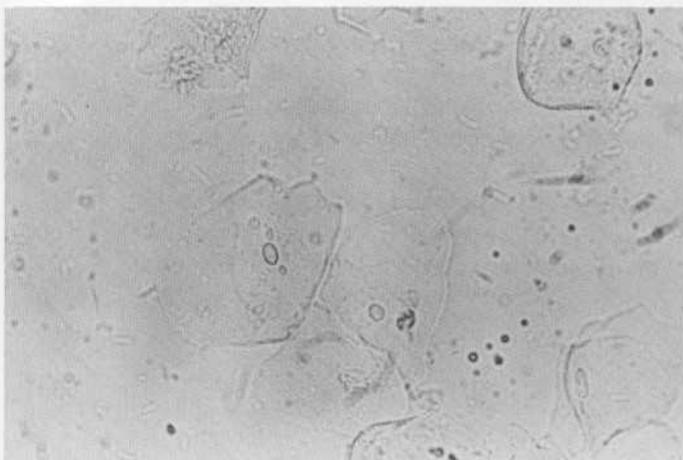


Figure 2: Vaginal wet prep findings in a normal, noninfected patient

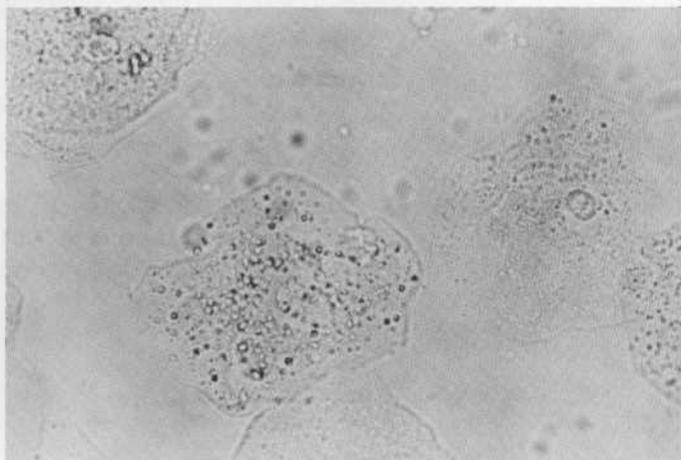


Figure 3: Vacuolated squamous cell.

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For the correct diagnosis and a review of the condition, refer to the next page.

Diagnosis: Gardnerella vaginalis infection

This patient presents with a typical history for a vaginitis. It is important to recognize that about half of women with dysuria have a vaginitis rather than cystitis. The clue to the correct diagnosis is either the absence of any white blood cells in the urinalysis or the presence of both white blood cells and squamous cells, indicating vaginal contamination of the urine specimen.

The best test to diagnose the cause of a vaginitis is the wet prep examination. The clinical history and physical examination are often misleading since the "classic findings" (i.e., a cheesy discharge in a Candida infection) may be misleading. In addition, many women have multiple pathogens (i.e., Trichomonas and Gardnerella).

It is important in the wet prep to examine the background bacteria and to look for white blood cells. Most of the common pathogens will produce a white blood cell response (i.e., Candida, Trichomonas, GC, etc.). A Gardnerella infection by itself is not usually associated with a white cell response.

The background organisms in a noninfected patient are usually large rods (i.e., Lactobacilli). In Gardnerella infections these rods are replaced by many very fine coccobacilli. These are the Gardnerella organism.

The other typical finding in Gardnerella vaginitis is the presence of "clue cells". These are squamous

cells which are covered with the Gardnerella organism. Not all of the cells will be clued and it is common for only part of any one cell to be clued. Clue cells will have a shaggy, indistinct outer border. Compare the clue cells in Figure 1 with the normal squamous cells in Figure 2. Also note that the large rods in Figure 2 are replaced by small coccobacilli as the background bacteria in Figure 1.

A common mistake is to misidentify a vacuolated squamous cell as a clue cell. Such a cell is illustrated in Figure 3. Note that this cell's edge is shared. The vacuoles are within the cell and are more distinct than the bacteria which adhere to the surface of a clue cell. Vacuolated squamous cells are normal and do not indicate disease.

Gardnerella infections have in the past been referred to as "Haemophilus vaginitis" or "nonspecific vaginitis". There has been a recent trend to change the name of "anaerobic vaginosis". This frequent name change indicates that the disease is to a large extent very poorly understood. The current recommended treatment is Metronidazole 500 mg bid for seven days. In recurrent cases, it is advisable to treat the sexual partner.

Reference

Fischer PM, Addison LA, Curtis P, Mitchell JM. The Office Laboratory. Norwalk, CT, Appleton-Century-Crofts, 1983.