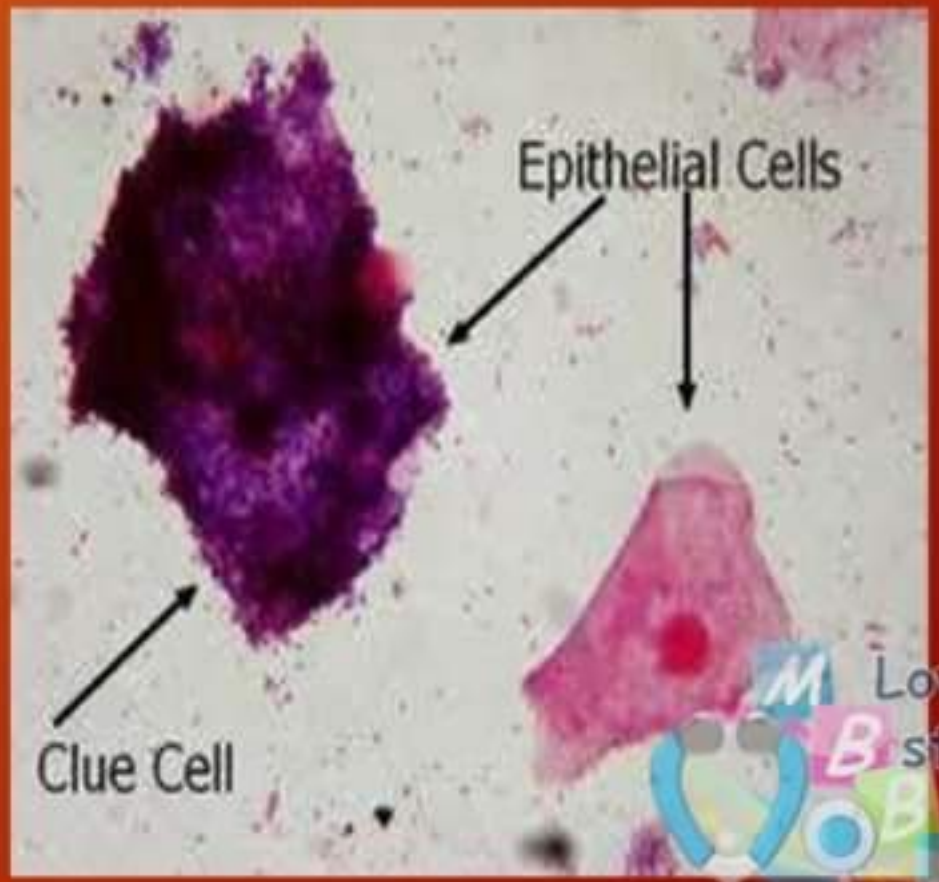
Bacterial Vaginosis

(Gardnerella Vaginitis)

Gram Stain still the simple in diagnosis of Bacterial Vaginosis

- The Centers for Disease Control and Prevention (2010) also recommend the gram stain as the gold standard for diagnosis of bacterial vaginosis



Culturing

- Grows on Blood and Chocolate Agar
- Hemolytic colonies on Human and Rabbit blood agar,
- Catalase -
- Oxidase -

Dr.T.V.Rao MD

Symptoms

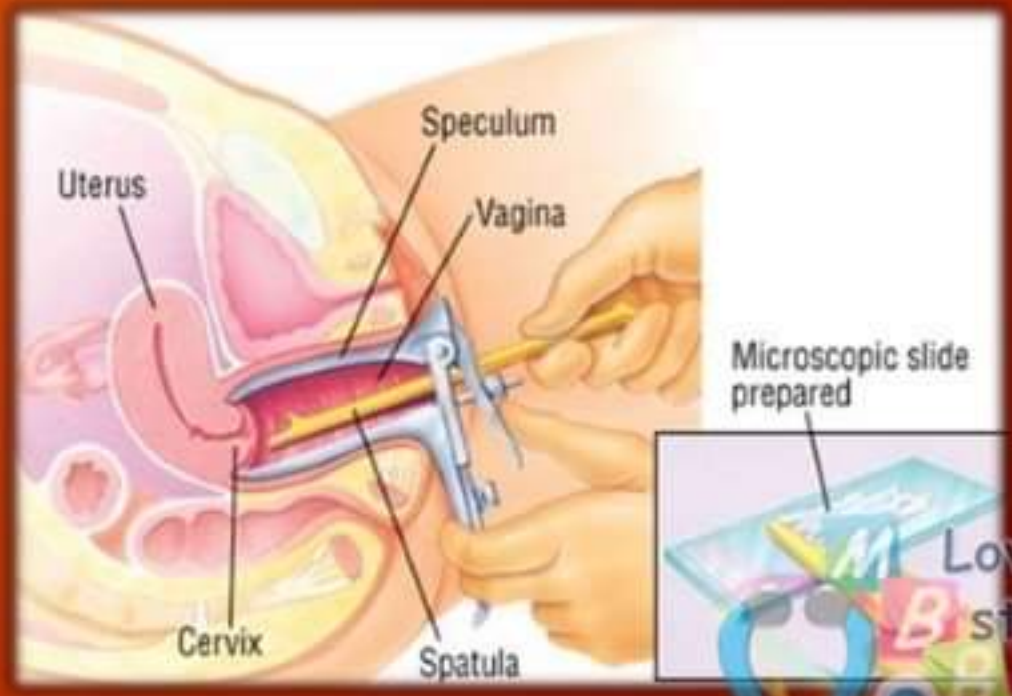
- Up to 50% of women diagnosed with bacterial vaginosis do not have symptoms. In others, it causes an unpleasant "fishy" vaginal odor and a yellow or white vaginal discharge. For some women, these symptoms are especially bothersome during or after intercourse.

Observation of Vaginal Discharge

- The discharge seen in bacterial vaginosis tends to be thinner than the "cheesy," thick discharge seen in vaginal yeast (Candida) infections. Bacterial vaginosis usually does not cause significant irritation of the vulva or pain during intercourse. If you have these symptoms, your doctor will check for other possible causes.

No perfect test

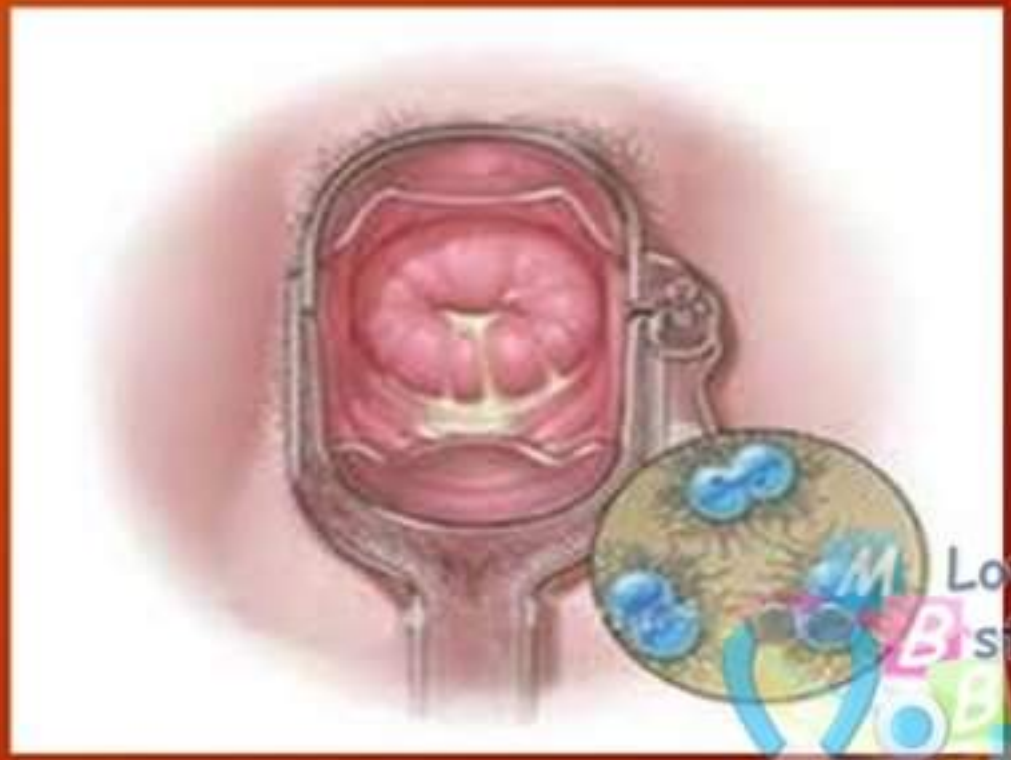
- There is no perfect test, but if you have three of the following four criteria, it is highly likely that you have bacterial vaginosis:
- 1 White, thin, coating on your vaginal walls during the pelvic exam



Dr.T.V.Rao MD

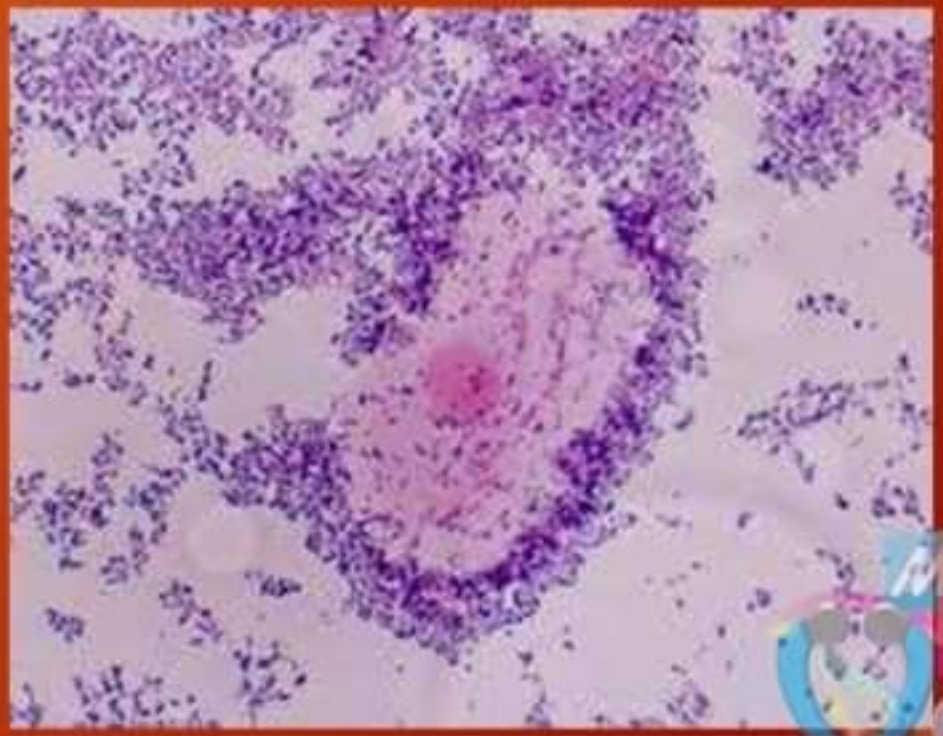
Diagnosis

- 2 pH test of vaginal discharge that shows low acidity (pH greater than 4.5)
- 3 Fishy odor when a sample of vaginal discharge is combined with a drop of potassium hydroxide on a glass slide (the "whiff test")



Clue cells

- 4 Clue cells (vaginal skin cells that are coated with bacteria) visible on microscopic exam of vaginal fluid



Newer methods in diagnosis of Genital Infections

- DNA probes have been developed to directly detect the presence of candida, trichomonas and Gardnerella, thus providing a more objective diagnosis. Since Gardnerella is a normal part of the vaginal flora, the DNA probe test is designed to be relatively insensitive, detecting only pathogenic levels of Gardnerella. The Affirm VP III Microbial Identification System (Becton Dickinson) is a commercially available DNA probe office-based test kit that simultaneously detects the presence of Gardnerella, trichomonas and candida.

Treatment

- Commonly treat bacterial vaginosis with metronidazole (Flagyl or MetroGel-Vaginal) or clindamycin (Cleocin). Either can be taken by mouth or applied as a vaginal cream or gel. However, the U.S. Centers for Disease Control and Prevention (CDC) recommends that all pregnant women with symptoms be treated with oral medications because the medications are safe and work better than vaginal creams or gels.

Treatment

- Studies show that a seven-day treatment with oral metronidazole or a five-day treatment with metronidazole vaginal gel is equally effective in non-pregnant women. Clindamycin vaginal cream is slightly less effective than either type of metronidazole.

What is Bacterial vaginosis

- Bacterial vaginosis is the most common cause of abnormal vaginal odour and discharge. It is caused by a change in the type of bacteria found in the vagina. Normally, bacteria belonging mostly to the Lactobacillus family live harmlessly in the vagina and produce chemicals that keep the vagina mildly acidic. In bacterial vaginosis, Lactobacillus bacteria are replaced by other types of bacteria that normally are present in smaller concentrations in the vagina.

Complications

- The bacterial vaginosis has been associated with the development of pelvic inflammatory disease and other infections after endometrial biopsy, surgical abortion, hysterectomy, intrauterine device placement, Caesarean section and uterine curettage.

Risk factors

- Risk factors that seem to increase the likelihood of bacterial vaginosis include a history of multiple sex partners, a sexual relationship with a new partner, cigarette smoking, vaginal douching and the use of the intrauterine contraceptive device (IUD). Although most of these risk factors are related to sexual activity, women who have never had vaginal intercourse can also develop bacterial vaginosis.

Sexual Activity

- The CDC states that any woman can develop gardnerella, regardless of whether she is sexually active. However, sexual activity and level of sexual activity does seem to be a factor. Women who have multiple sexual partners are at a higher risk, and women with new sexual partners are more apt to develop gardnerella as well

Dr. T. V. Rao MD

Bacterial vaginosis and pregnancy.

- Bacterial vaginosis often occurs during pregnancy. It may cause premature labor and delivery, premature rupture of membranes, and postpartum uterine infections. This is why pregnant women with a history of premature labor or other complications may be checked for bacterial vaginosis even when they don't have any symptoms.

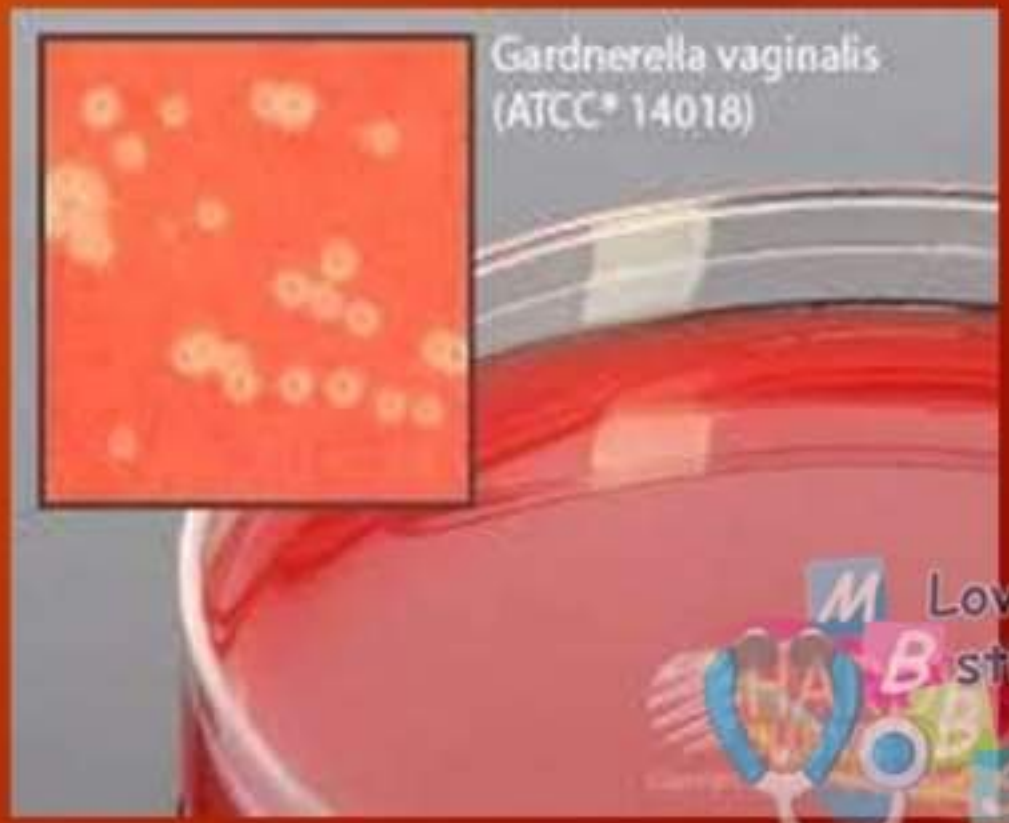
Dr.T.V.Rao MD

Gardnerella Vaginitis

- Gram-variable-staining rod, facultative anaerobic bacteria (actually has a Gram-positive cell wall, but because the cell wall is so thin it can appear either Gram-positive or Gram-negative under the microscope).
- Small (1-1.5 µm diameter) non-spore forming, non-motile coccobacilli.
- Previously classified as Haemophilus vaginalis and afterwards as Corynebacterium vaginalis.

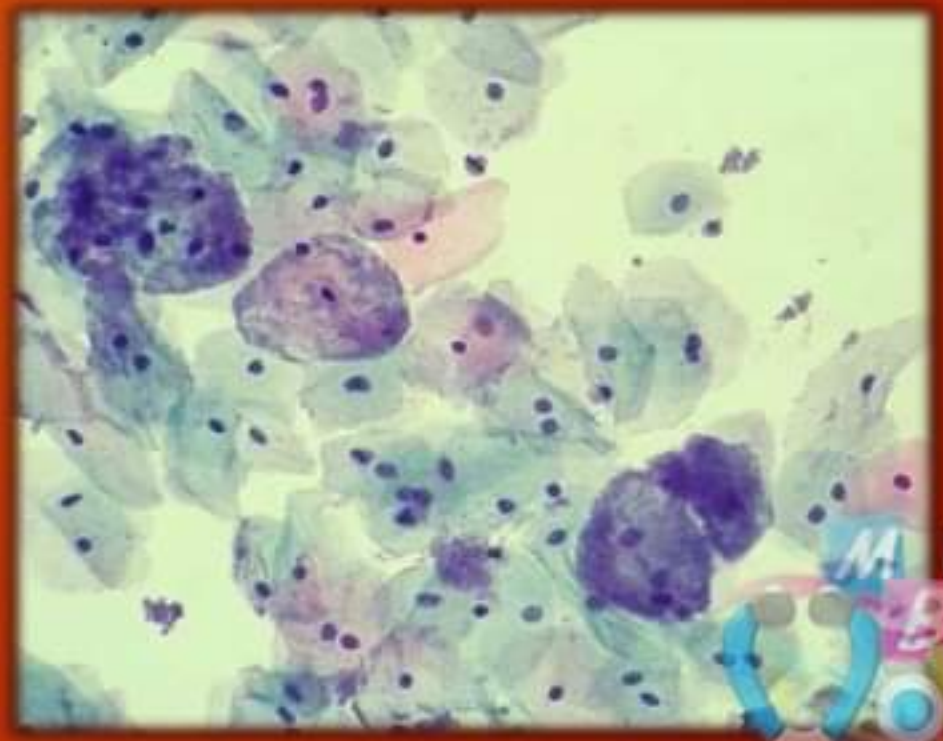
Gardnerella Vaginitis

- Growth: grows as small, circular, convex, gray colonies on chocolate agar; it also grows on HBT agar.
- Can cause bacterial vaginosis in some women as a result of a disruption in the normal vaginal micro flora.



Can be isolated from other Areas

- Typically isolated in genital cultures. May also be detected in other samples from blood, urine, and pharynx



Morphology

- Small, Gram negative, on motile
- Pleomorphic rod which shows metachromatic granules
- Presence of Clue cells