

Antimicrobial Case study

1. Infection in the urinary system region is known as urinary tract infection, and it is one of the most vernacular diseases in the United States each year. Between 40% and 50% of women have had at least one urinary tract infection in their lifetime (Mehta, et al., 2022). Frequent sexual intercourse, a lack of urination following intercourse, the use of a diaphragm (ill-fitting), spermicide chemicals, and a history of recurrent urinary tract infections are all risk factors for urinary tract infections in women. For this 20-year-old female, the best antibiotic regimen available is Trimethoprim-sulfamethoxazole or fluoroquinolones. It kills aerobic gram-negative bacteria and has minimal effect on vaginal and fecal anaerobic bacteria appear to be the best long-term treatment for uncomplicated urinary tract infections. However, a recent study of outpatient women aged 18 to 50 years looked at Trimethoprim-sulfamethoxazole has shown the most dramatic growth in resistance in recent years.

The Infectious Disease Society of America's guideline found that a three-day course of trimethoprim, trimethoprim-sulfamethoxazole, and fluoroquinolone was more effective than single-dose regimens. In addition, they are better tolerated than more extended regimens. Treating the condition with trimethoprim-sulfamethoxazole, trimethoprim, or fluoroquinolones for three days should result in a 90 percent eradication rate with minimal side effects (Jancel, 2002).

2. Bacterial vaginosis is one of the most prevalent causes of foul-smelling vaginal discharge. It is a disorder in which the normal vaginal flora overgrows (Kairys & Garg, 2018).

It is also linked to sexually transmitted infections (STIs) and poor pregnancy outcomes. Vaginal douching, for example, has been proposed as one of several risk factors for BV infection. One of the most successful treatments is metronidazole vaginal gel, placed into the vagina before bedtime for five days. Metronidazole is also available as a tablet, taken twice