

CYSTITIS RESEARCH CENTER

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DIAGNOSIS AND MANAGEMENT OF BLADDER DISORDER (CYSTITIS/PROSTATITIS)

Background:

The laboratory aspects for treatment of the above subject involves certain universal components, very important to the direction of the Lab technology:

1. The first of these, arising long before the advent of microbiology, was the ancient Latin description of INFECTION, passed on down via medical schools to present times, in the form of the Latin trilogy: RUBOR, TUMOR, FRUOR; symptoms of Erythema (congestion in the circulatory system with increased temperature, local or general; swelling, (or edema); and discomfort (pain, burning). Observing this Trilogy of symptoms, the clinician can be sure the patient is experiencing INFECTION, and CLASSIC DIAGNOSIS is done (Cardinal technology).

2. INFECTION implies penetration of living tissue by a pathogen, which in the case of cystitis is a strain of Streptococcus, usually the Enterococcus. Occasionally, other strains are also recovered.

3. In some cases there is a different situation that may be encountered: the simple urinary tract "infection" (UTI). This is the result of Saprophyte colonization; a build-up of gram-negative bacillary forms (such as *E. coli*, and other coliforms), These are the bacteria recovered by the conventional colony count procedure in medical (hospital) Labs world over; reported, and erroneously widely accepted by the medical profession as the usual UTI, and treated empirically for a few days, with only temporary results. In these simple UTI cases, the patient experiences discomfort due to the fermentation of dead organic matter. They do not cause INFECTION. Rather, the Saprophytes merely mask the existence of the underlying pathogens if also present.

4. Most cases of cystitis are women, and knowing of their typical symptoms, the laboratorian must expect the Strep to appear on the first specimen in Cardinal technology. If it does not respond to appropriate retesting, the following procedure can be used to resolve the problem:

- a. On day 1 & 2, have patient refrain from antibiotics, and intercourse (including nighttime of day 2).
- b. At bedtime of day 2, have her do the urethral flush.
- c. On A.M. of day 3, regardless of voiding during the night, take a clean voided urine -- on full bladder.

d. Send urine specimen in to the CRC for routine washing, and broth culture. This procedure has usually resulted in retrieval of the pathogen.

5. In many cases, both kinds of disorder (UTI & 1C) may occur. For this reason it is necessary to do a routine differential test, by transfer of an aliquot of the broth culture to PEA (for Gram-pos pathogen) and to EMB (for the Gram-neg saprophyte); as it may be necessary to suggest antibiotic for both recovered organisms: if there are continued symptoms after suppression of the pathogen (for about three months); and there is recovery of the Gram-neg saprophyte, in spite of regular urethral flush, the patient may require 5-7 days of CIPRO antibiotic (250 mg 2X/day), along with the regular dose of the anti-infecting antibiotic.

6. ANTIBIOTIC SENSITIVITY. After isolating the pathogenic organism, a colony is picked from the PEA plate and transferred to a blood-agar plate (for confluent growth). A suspension of the organism is made, and a trypticase soy agar plate is set up with sensitivity and the diameter of the clear areas are recorded; Augmentin, Amoxicillin (Ampicillin), Biaxin, Rifampin, Doxycycline, Macroclant, Minocin, Levaquin, Clindamicin, Keflex, Suprex. Note: Ampicillin equal to Amoxicillin.