

*Updates and Information from Rex Healthcare and Rex
Outreach*

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**Mycoplasma and
Ureaplasma
Infections**

Mycoplasmas are the smallest known free-living organisms and are unique among bacteria. Unlike conventional bacteria, mycoplasmas lack cell walls. Only three Mycoplasma species are well-established human pathogens, *M. pneumoniae*, *M. hominis* and *U. urealyticum*.¹

M. pneumoniae is a cause of community-acquired pneumonia. The most common clinical syndrome is tracheobronchitis, often accompanied by upper respiratory tract symptoms. A mycoplasmal infection should be suspected when no other microbial etiology is identified and there is poor response to treatment with beta-lactam agents.¹ Diagnosis is best accomplished by serological testing. Cold agglutinins occur in about 50% of patients with *M. pneumoniae* infection but are nonspecific and generally not recommended. Rex offers an enzyme linked immunobinding assay for *M. pneumoniae* IgG/IgM antibody (see January 1996 Laboratory Bulletin). Blood for testing should be collected in a red top tube.

U. urealyticum and *M. hominis* can be isolated from the lower genital tract in the majority of sexually active adults. These organisms can be associated with a wide range of clinical conditions. Routine screening of the lower urogenital tracts of adults for genital mycoplasmas is not justified. Immunocompromised persons warrant cultures if systemic or focal infections are suspected.¹ Cultures for mycoplasma and ureaplasma are sent to Mayo Medical Laboratories. **The culture site is required on the Mayo request form.** Acceptable culture sites for *U. urealyticum* include endocervix, prostatic fluid, semen, urethra, vagina, and urine. Swab specimens should be collected using a minitip Culturette inserted 2-3 cm into the male urethra and rotated. A standard Culturette swab should be used for females and is inserted into the endocervix and rotated. Be sure to break the Culturette vial to keep the swabs moist and hold refrigerated until delivered to the laboratory. The laboratory will transfer the swab into a vial of 2SP transport medium and ship frozen on dry ice to Mayo. Negatives are reported by Mayo after 5 days.

Extrapulmonary and extragenital mycoplasmal infections probably occur more often than is recognized because the organisms are not sought routinely. Mycoplasmas have been found in wound infections, brain abscesses, and osteomyelitis lesions. Mayo will

¹ **Laboratory Diagnosis of Mycoplasmal and Ureaplasma Infections**, Waites, Bebear, Robertson and Cassell, *Clinical Microbiology Newsletter*, July 15, 1996.

perform these cultures on special request. Appropriate fluid from the site of infection should be submitted to the laboratory.

Due to the predictable susceptibility of most mycoplasmas to macrolides and tetracyclines, it is currently not considered necessary to obtain susceptibility tests for these organisms.

Karl T. Kleeman, Ph.D.

Follow-up on indications for H. pylori serology

In an article evaluating a new test for *H. pylori* antibody (July, 1996 issue of the Journal of Clinical Microbiology), the author states:

“Only ulcerous patients with *H. pylori* infection require specific antimicrobial treatment. Thus, to establish that there is an infection, upper gastrointestinal endoscopy is necessary for a direct diagnosis. Serology may be useful when endoscopy is not indicated, particularly with children, or to confirm a negative *H. pylori* status. Serology has also been proposed as pre-endoscopy screening to reduce endoscopy workload in young dyspeptic patients and in epidemiological studies.”²

The appropriate use of *H. pylori* serology is an area of significant debate. If you have information to contribute to the debate, please forward to Dr. Kleeman and we will be happy to include your comments in the next Laboratory Bulletin.

Karl T. Kleeman, Ph.D.

VRE (vancomycin resistant enterococcus) stool screen

A rapid increase in the incidence of infection and colonization with vancomycin-resistant enterococci has been reported from U.S. hospitals in the last 5 years. The Centers for Disease Control and Prevention, Atlanta, Georgia published a report on “Recommendations for Preventing the Spread of Vancomycin Resistance” in February, 1995. One of the most sensitive methods for the detection of VRE is a stool screen. Patients with VRE from any site will generally have intestinal colonization with this organism.³

At Rex in 1995, 10 *Enterococcus faecium* and 3 *E. faecalis* isolates were shown to be vancomycin resistant. Routine stool screening is not recommended, however, screening may be used prior to transfer of patients to nursing homes. Contact Infection Control Services (783-3219) for further information.

Starting July, 15, 1996, Rex Laboratory will offer VRE screening of stools. Stool specimens or rectal swabs should be submitted.

Order in the HIS computer as VRE.

Karl T. Kleeman, Ph.D.

Antibiotic cost per day of treatment

On the following two pages you will find current cost data on antibiotics. This data together with the "Antibiotic Susceptibility Patterns" published in the February, 1996 Laboratory Bulletin, should be useful in your selection of antibiotics.

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²Evaluation of Pyloriset Dry, a New Rapid Agglutination Test for Helicobacter pylori Antibody Detection, A. Lozniewski et al, Journal of Clinical Microbiology, July, 1996.

³ Recommendations for Preventing the Spread of Vancomycin Resistance, Hospital Infection Control Practices Advisory Committee, Centers for Disease Control and Prevention, Atlanta, Georgia, February, 1995.

For further information, call the Laboratory (783-3040). Telephone extensions are: Dr. Benson (3059), Dr. Brainard (3056), Dr. Carter (3058), Dr. Chiavetta (3040), Dr. Kanich (3057), Dr. Kleeman (3063), Dr. Nance (3286), Dr. Sorge (3062), Barbara Wetherbee (Director 3055), Robin Ivosic (Core Lab Manager 3053), Linda Lompa (Blood Services Manager 781-0220), Lynn Nichols (Rex Outreach 783-4488), Rex Outreach Couriers (783-4400), Karen Sanderson (Lab Compliance Specialist 3396), Greg Wilson (Customer Services Manager 3318).