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Methicillin Resistant Staphylococcus Aureus (MRSA) Polymerase Chain Reaction (PCR) Assay Available

Laura Ovittore, MT (ASCP)

The Laboratory is pleased to announce the availability of the Xpert MRSA assay, a qualitative polymerase chain reaction (PCR) in-vitro diagnostic test for the rapid detection of Methicillin Resistant Staph aureus (MRSA) from nasal swabs in patients at risk for nasal colonization. The Cepheid Xpert MRSA assay is an automated real-time polymerase chain reaction (RT-PCR) to detect MRSA DNA, performed on the GeneXpert DX System. The test, using a maximum TAT of 2 hours, will be available STAT, 24/7, for patients being admitted or transferred to the ICU. Routine requests to rule out MRSA from all patients and sources will continue to be performed via the current process, bacterial culture.

Staphylococcus aureus is a major nosocomial pathogen that causes a wide range of diseases including endocarditis, osteomyelitis, toxic shock syndrome, food poisoning, carbuncles and boils. Acquisition and spread of beta-lactamase producing plasmids thwarted the effectiveness of penicillin as the treatment of choice for Staphylococcus infections and after the introduction of methicillin as an alternative treatment in 1959, strains of MRSA were identified approximately one year later. Methicillin resistance is the result of the S. aureus organism acquiring the meca gene.

Today, MRSA is associated in approximately 25% of nosocomial infections and reports of community acquired MRSA are on the increase, resulting in significant morbidity and mortality. In an attempt to limit the spread of MRSA infections, various strategies and policies are being implemented in healthcare settings. The Xpert MRSA assay is intended to aid in the prevention and control of MRSA infections. Controlling MRSA in healthcare settings has become the focus of many hospital infection control programs. Implementation of the Xpert MRSA assay will allow for more timely and sensitive methods for surveillance of MRSA versus the standard culture surveillance methods currently available, which are very laborious and time intensive.

SPECIMEN REQUIREMENTS:

A nasal swab must be collected using the REMEL double tipped culturette transport swab available from the laboratory. The use of the single tip culturette platform is unacceptable for this assay.

Collection of nasal samples: remove the culturette from its packaging. Insert dry swabs 1-2 cm into the first nostril and rotate the swab against the inside of the nostril for 3 seconds. Using the same swab, repeat for the second nostril, making sure not to touch anything but the inside of the nose. Remove the cap from the plastic transport tube and place the collected swab into the transport tube. Make sure the red cap is on tightly. Store swab at room temperature until delivery to the laboratory. If the swab cannot be delivered to the laboratory within 24 hours, the swab must be stored at 2 - 8°C.

TEST REQUESTS:

Requests for the assay being performed on patients being admitted or transferred to the ICU must be written as **MRSA PCR SCREEN**. All other requests must be written as rule out (r/o) Staph.

EXPECTED RESULTS:

The assay will be resulted as either Positive or Negative for MRSA – test performed via Cepheid GeneXpert.

If a positive result has been reported and there is a need for concomitant cultures to recover the organism to perform epidemiological typing or susceptibility testing, the Molecular Laboratory must be contacted at 739-7578 or the Microbiology Laboratory at 739-7305 within 72 hours of initial specimen collection.

PTH ANNOUNCEMENT:

For improved specimen stability, effective, Wednesday, March 26, 2008, please collect a lavender stoppered tube for PTH (parathyroid testing). Continue to collect an SST tube for the associated ionized calcium. PTH testing may not be added on to the SST tube. An order for PTH will print 2 labels; one for each test.

REQUISITIONS FOR PATIENT TESTING:

Please remember to include the first and last name of the clinician ordering the testing so that the laboratory may ensure reports are forwarded to the correct recipient. The laboratory is experiencing many cases where the first initial and last name could apply to more than one clinician. Required information on the requisition includes the first and last name of the patient as well.