

**Indications for
Autopsy**

Indications for autopsies are not defined specifically, and constantly change in view of new diagnostic techniques and as expenses rise. The College of American Pathologists has developed a list of indications for appropriate use of autopsy services:

1. Deaths in which an autopsy may help explain unknown and unanticipated medical complications.
2. Deaths in which the cause is not known with certainty on clinical grounds.
3. Cases in which an autopsy may help to allay the concerns of the family and or public regarding the death, and provide reassurance to them regarding the same.
4. Unexpected or unexplained deaths occurring during or following any dental, mental or surgical diagnostic procedures and or therapy.
5. Deaths occurring in patients who have participated in clinical trials (protocols) approved and monitored by the Institutional Review Board.
6. Sudden, unexpected or unexplained deaths which are apparently natural and not subject to a forensic medical jurisdiction.
7. Deaths in which the patient sustained, or apparently sustained, an injury while hospitalized, but are not otherwise covered by forensic jurisdiction.
8. Death resulting from high risk infectious and contagious diseases.
9. All obstetrical deaths.
10. Deaths known or suspected to have resulted from environmental or occupational hazards.

Medical Examiner cases are identified by the proximate cause or circumstances of the death, not the duration since a physician was seen. There is no "24-hour" or "DOA" rule establishing a death automatically as a Medical Examiner case; nor is there a "Statute of Limitations". A patient who dies as a consequence of trauma is a Medical Examiner's case, no matter how many months or years prior to the death the injury occurs. Consult the Medical Examiner in regard to any death about which you have doubt or question. If you believe a death may be a Medical Examiner's case, do **not** ask the nearest of kin for permission for an autopsy until the Medical Examiner has investigated the case. It is all right to notify the family that you are notifying the Medical Examiner. The Medical Examiner has full authority by statute to order an autopsy if, in his judgment, it is "advisable" or "in the public interest". All Medical Examiner's cases at Rex Hospital should be referred to the Medical Examiner "on call" for the Department of Pathology. Possible medicolegal cases require special attention. North Carolina law requires that deaths be reported to the Medical Examiner if they are related to the

following circumstances:

- Accidental deaths - all forms including deaths arising from employment, violent, or unnatural death.
- Homicidal deaths.
- Suicidal deaths.
- Abortion (criminal or self-induced) deaths.
- Sudden unexpected deaths - if a physician has not been in attendance or has no reasonable opinion about the cause and manner of death.
- Deaths while in police custody.
- Deaths in the public interest - potential public health menace, such as contagious disease or occupational hazard.
- Suspicious deaths.
- Therapeutic misadventures (diagnostic or therapeutic) - Operative deaths (deaths due to or contributed by anesthesia **or** deaths during or immediately following operative or manipulative procedure) - Medication (deaths suspected to have resulted from the administration of a drug, serum, vaccine, or any other substance for diagnostic, therapeutic or immunological purpose).

Robert E. Kanich, M.D.

Mycoplasma pneumoniae antibody test now available

Mycoplasma pneumoniae is one of the most common causes of primary atypical pneumonia and febrile upper respiratory tract infections.

Rex is now offering a *Mycoplasma pneumoniae* IgG/IgM enzyme linked immunobinding assay. Serum or plasma is required. The test is a qualitative test for the simultaneous detection of IgG/IgM antibody. The results obtained with this test must be correlated with other clinical and laboratory findings. A sample should be collected once clinical manifestations of acute *M. pneumoniae* infection occur. False negatives can be obtained if blood samples are collected too early. If negative results are obtained and a clinical suspicion of *Mycoplasma pneumoniae* infection still exists, a second serum sample should be collected approximately two weeks later and retested. A positive test on the second specimen suggests an acute infection.

*Order in the HIS computer system as **mycoplasma.***

*Karl T. Kleeman, Ph.D.
Debbie Brown, MT (ASCP)*

New rapid AFB culture system

A new MB/BacT system from Organon Teknika is being installed at Rex. This system has been shown to isolate 96.8% of mycobacteria (including 96.7% of *M. tuberculosis*) more rapidly than conventional media. The system continually monitors the cultures and alerts the technologist when positives are detected. Instrument positives are then confirmed by staining and Gen-Probe identification. The overall mean time to detection has been shown to be 15.5 days for all mycobacteria and 18 days for *M. tuberculosis*. Conventional media will still be inoculated as a back-up and held for 8 weeks before a final negative report is issued.

Karl T. Kleeman, Ph.D.

New ASO/Anti

Streptococcal infections of the pharynx and skin are most appropriately

DNase B package for post- streptococcal disease

confirmed using a direct Strep A antigen test or by culture. The diagnosis of rheumatic fever or poststreptococcal nephritis associated with recent streptococcal infection, may be aided with this new ASO/Anti-DNase package. These new quantitative methods replace the package previously sent to Mayo Medical. The literature indicates that streptococcal infections will be positive for either ASO or anti-DNase B 80 to 85% of the time. By using both tests, the detection rate is increased to 95%.

Order in the HIS computer as ASO.

Please make the following changes to ASO (Strep Antibody) page 145 in the Rex Ancillary Services Handbook. Delete the word Screen in the title. Change CPT to 86060, 86215. Logistics LAB: Core; phone 783-3020; Availability: ...; test is done Monday, Wednesday and Friday.

Specimen MINIMUM VOLUME: 0.5 ml serum

Interpretive REFERENCE RANGE...

ASO	0 - 250 IU/ml
Anti-DNase B	Adults <= 85 units
	Children 0 - 6 years, <= 60 units
	6 -10 years, <= 170 units

USE: Detection of antibodies to streptococcal antigens DNase B and streptolysin O. METHODOLOGY: Rate nephelometry and enzyme inhibition.

*Karl T. Kleeman, Ph.D.
Debbie Brown, MT(ASCP)*

New quantitative procedure for cultures of cath tips

Catheter tips will now be cultured using a semi-quantitative method. The results will be reported as few, moderate or many according to the following:

< 15 colonies	- few
15-30 colonies	- moderate
> 30 colonies	- many

If > 15 colonies of Staph (coag pos or neg), Group A Strep, Enterococci, Enterobacteriaceae or Yeast, the isolate will be identified and susceptibility tests performed (susceptibilities are not done on Group A Strep or Yeast). If < 15 colonies, the quantity will be reported as *few* and the following statement included in the report, *For susceptibilities notify the lab within 24 hrs at ext 3051.*

Karl T. Kleeman, Ph.D.

New administrative laboratory director

Barbara L. Wetherbee has joined the Rex Laboratory staff in the newly created position of Laboratory Director. Barbara comes to Rex from Kalamazoo, Michigan where she served as Laboratory Director for Borgess Medical Center. Barbara is a MT(ASCP) with a Masters of Public Administration from Western Michigan University. Dr. Robert Kanich continues as Medical Director of Laboratories.

Changes in Anaerobic Culture

Methods for recovery of anaerobic bacteria from clinical specimens as well as techniques for identifying isolates are time consuming, often requiring many days. In addition, anaerobic infections are often poly-

Procedures

microbic and associated with tissue necrosis and abscess formation.

Anaerobic infections are often aggressively managed with debridement, aspiration and/or surgical removal of infected tissue. In many cases, anti-microbial therapy is used as an adjunct to primary surgical management.

Clostridium perfringens is the major cause of clostridial myonecrosis (gas gangrene). This condition includes systemic toxicity and requires immediate intervention.

Resistance patterns of anaerobic bacteria are generally predictable. *Bacteroides species* seem to be the most resistant. Only 5-20% of the *Bacteroides fragilis* group are sensitive to beta lactam drugs because of the production of beta-lactimase.

To speed up the reporting of anaerobic cultures, Rex Laboratory will limit the extent of initial work-ups. As a result of this, one or more of the following reports will be given:

1. *Clostridium perfringens* and/or *Bacteroides sp.* will be identified and reported as soon as possible.
2. All other anaerobic bacteria will be reported based on the Gram stain morphology but no further identification will be performed without a specific physician request.
3. If 3 or more different anaerobic organisms are isolated from a single specimen, the report will read **mixed anaerobes present**.
4. If *Staphylococcus aureus*, *Pseudomonas sp.* or Beta Hemolytic *Streptococci* are isolated and have not already been reported from a routine culture from the same source, these will be reported.

These procedures will allow more timely, cost-effective reporting. If additional identification or susceptibility testing is needed to guide therapy, the laboratory must be notified (783-3051). The organisms are held 3 days after reporting before being discarded. Anaerobic susceptibility tests are sent to Mayo Medical Laboratories and require about 1 week.

Karl T. Kleeman, Ph.D.

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 (Lab 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 (Specialty Labs Manager 3396), Greg Wilson (Customer Services Manager 3318).