Lactoferrin and Diarrhea

Introduction:
The fecal lactoferrin agglutination test can detect inflammatory conditions caused by neutrophils in the GI tract. Lactoferrin is an iron-binding glycoprotein found concentrated in the secondary granules of neutrophils (segs). This stable protein is not found in lymphocytes and monocytes and is not readily detected in fecal specimens unless neutrophils are present. If lactoferrin is present at elevated levels in a clinical specimen, it can be easily detected by a latex agglutination test. The lactoferrin assay is a more sensitive test for the detection of fecal neutrophils in diarrheal stools than the microscopic exam of stool for neutrophils. The “stool for segs” exam is not very reproducible and requires rapid examination within minutes to minimize inaccurate results caused by cell lysis. Since lactoferrin can be detected with either intact or lysed neutrophils, it is a more efficient test than microscopy.

Clinical Usefulness:
Most cases of acute diarrhea are caused by infectious agents. If an acute infectious etiology is suspected, it is reasonable to screen for fecal neutrophils and occult blood. Patients with acute inflammatory diarrhea and a positive lactoferrin are more likely to be infected by an invasive bacterial pathogen. Some experts have viewed fecal lactoferrin as a screening test of choice to avoid expensive stool cultures in the diagnostic approach to bacterial diarrhea. However, there is not consensus of opinion on the value of lactoferrin as a screening test prior to culture.

Lactoferrin is also useful in the diagnosis of chronic or recurrent diarrhea. The major cause of fecal neutrophils in patients with chronic diarrhea is chronic inflammatory bowel disease of the colon. The activity of the disease has a positive correlation with the presence of lactoferrin in both ulcerative colitis and Crohn’s disease.

Pitfalls:
Since lactoferrin is also present in mother’s milk, the test may be positive in nursing children who lack inflammation of the colon. The test must be done on liquid or semisolid stools, not formed stools.

Laboratory Details:
On December 6, 1999, and thereafter at the Rex Hospital Lab, all requests for fecal WBC’s or segs will be performed by lactoferrin assay rather than by microscopy. If a “stool for segs” exam is ordered, a stool lactoferrin test will be done instead. The test will be available stat or routine and reported as positive or negative for lactoferrin. The test should be a performed only on a
diarrheal stool. The charge for an outpatient fecal lactoferrin test is $15.00. The CPT code is 86403.

**References:**


Stephen V. Chiavetta, MD
Colleen Miller, BA, ASCP

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**New Pathologist Arrival**

Dr. Russell (Rusty) A. Ball, MD, a native of West Virginia, joined the Rex Department of Pathology on December 1, 1999. He is board certified in anatomic and clinical pathology with subspecialization and certification in dermatopathology. Dr. Ball graduated *magna cum laude* from Virginia Wesleyan College in Norfolk, Virginia in 1984. He received his MD degree from West Virginia University School of Medicine in 1989 and was elected to Alpha Omega Alpha Honor Society. He completed a year of internship in internal medicine followed by four years of pathology training at the Naval Medical Center, Portsmouth, Virginia. He completed a fellowship in dermatopathology at Harvard Medical School in 1997.

Dr. Ball has published several papers on pigmented skin lesions. He comes to Raleigh after serving 2 years at Bethesda Naval Hospital in Maryland where he had a referral practice in dermatopathology. Dr. Ball is married and has two children. We welcome him to our group and his family to Raleigh.

Stephen V. Chiavetta, MD

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**Client Service**

Client service and client satisfaction is important to our patient care efforts.
Rex Healthcare has a Laboratory Sales Representative, Darrell Dennis and a Client Service Representative, Debbie Lompa. Darrell is primarily responsible for sales but also assists in client service, particularly related to the couriers. Debbie Lompa assists clients with collection material and requisitions. Debbie also answers technical questions related to laboratory testing.

Kim Skelding is our billing specialist and is in charge of outpatient billing. Kim can assist with questions regarding compliance (proper coding for billing) or investigate any billing problems.

Suzy Bustard was recently hired by the pathologists to assist the Laboratory in providing client service related to anatomic pathology (particularly surgical pathology and cytology). Suzy is a certified cytotechnologist and is well versed in all aspects of tissue specimens and cytology.

Feel free to call any of these individuals with questions or pleas for help. It is our hope that these individuals enhance the service our Laboratory provides you and your patients.

To set up a new laboratory account call Darrell Dennis or Debbie Lompa. To set up a new pathology account call Suzy Bustard. For collection supplies, requisitions and technical assistance call Debbie Lompa. For pathology technical assistance call Suzy Bustard. For billing questions for general laboratory call Kim Skelding. For billing questions for pathology call Suzy Bustard.

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This is the last issue of the Rex Healthcare Laboratory Bulletin for 1999. Undoubtedly you have received notices from various businesses or organizations over the past 3 months detailing their plans for dealing with the “Y2K” phenomenon. We don’t want to be left out of all this, so a brief report of the Laboratory’s Y2K preparedness is presented herewith. A considerable amount of effort has been expended to assure that all automated laboratory instrumentation and the 3 laboratory information systems (Anatomic Pathology, Blood Services, and General Laboratory) will function properly as the new year unfurls. The following individuals, in particular, deserve recognition for their hard work: Tommy Ballard, Debbie Brown, Charles Daniel, DuWayne Engman, David Jung, Mike Leblanc, Elaine Patterson, Sheila Smithey, and Marla Spencer. As for the pathologists, our microscopes are fully Y2K compliant and our minds strain for a glimpse of the future.
(though one of us has periodic 60’s flashbacks). Dr. John Sorge and Mr. David Shepard will be available on January 1, 2000 to catch any airplanes falling from the sky (or at least investigate any resulting untimely deaths). So, while acknowledging that time waits for no one, we trust it will remain on our side as we begin the new year. We, in the Pathology Laboratory, wish you a Happy Holiday season and look forward to serving you in the coming year.

John D. Benson, MD

For further information, call the Laboratory (784-3040). Telephone extensions are: Pathologists’ Direct Line (3201), Sharon Logue (Lab Director 2400), Robin Ivusic (Core Lab Manager 3053), Clark Zervos (Blood Services Manager 785-4770), Rex Outreach (784-3040), Karen Sanderson (Customer Service Manager 3996).