EOSINOPHILS URINE

☒ St. Joseph Medical Center, Tacoma, WA	☒ St. Anthony Hospital Gig Harbor, WA	☐ Harrison Medical Center, Bremerton, WA
☒ St. Francis Hospital, Federal Way, WA	☐ St. Elizabeth Hospital Enumclaw, WA	☐ Harrison Medical Center, Silverdale, WA
☒ St. Clare Hospital Lakewood, WA	☒ Highline Medical Center Burien, WA	☐ PSC

PURPOSE

To provide instructions for the quantitative determination of Eosinophils in urine.

SPECIMEN COLLECTION

- 5-10mls or fresh well-mixed random urine.
- Perform testing immediately or can be refrigerated at 2-8˚C for up to 24 hours.
- Bring sample to room temperature before testing begins.

SUPPLIES

- Wright's stain or Quik stain
- 22% Bovine albumin
- Cytofunnel for Cytospin

STEPS

1. Testing must be completed even if there are no WBC's seen on the urinalysis instrument. Cells may be present after the centrifugation process.

2. Centrifuge urine for 10 minutes at 2200 RPM and aspirate off urine with a disposable pipet down to 1ml. If the specimen has many WBC's this step is not needed and can proceed to Step 3.

3. Assemble Cytospin cytocentrifuge with glass microscope slides and cytofunnel. Prepare 2 slides for each specimen.

4. Mix specimen well and place the remaining 1ml of urine and sediment into the Cytospin sample chamber splitting the sample evenly between the 2 chambers.

5. If the urine protein is negative or trace, add one drop of 22% bovine albumin to the chamber so that the cells adhere to the slide.

6. Place Cytospin sample into the Cytospin centrifuge, place on the top lid and close the cover. Centrifuge at 700rpm for 10 minutes.

7. Remove slides from chambers and allow to air dry.

8. Stain with Wright's stain or Quik stain

9. Examine the stained slide with low power (10X) and then oil immersion (100X). Count 300 WBC's. Count the number of eosinophils (WBC with orange granules) in the 300 WBC's.
   NOTE: Examine the slides for proper staining. If the staining is uneven, remake the slides

RESULT ENTRY

1. Report the percentage of eosinophils seen in the 300 WBC's

2. If less than 300 WBC's are present on the slide, report the percentage of eosinophils seen based on the number of WBC's counted.

3. If no WBC's are present on the slide, report the result as "No WBC's present"

4. Normal reference range: 0.00-0.9%

QUALITY CONTROL

1. Verify that the Wright's or Quik stain is working properly by reviewing a hematology slide and look for eosinophils on the slide. Make sure the cells are staining the orange granules in the cells.

2. Document in the QC log if the stain is working correctly.

REFERENCES

Karen M Rinsgrud, MT(ASCP), Assistant professor, Dept of Laboratory Medicine and Pathology, University of Minnesota Medical School, May 2002.