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Owner:	*Sally Kramer: Manager - Lab Science Tech - SJ*
Policy Area:	*Lab / Hematology*
References:	
Applicability:	*St. Joseph Medical Center* *St. Anthony Hospital* *St. Clare Hospital* *St. Elizabeth Hospital* *St. Francis Hospital*

Semen Analysis Post Vasectomy, R-W-HEM-1415-03

PURPOSE

To provide instruction for performing a wet-prep on post vasectomy semen specimens.

BACKGROUND

A wet-prep exam of semen for spermatozoa is performed to validate a successful vasectomy surgery.

RELATED DOCUMENTS

Patient Instruction, Semen Analysis Collection R-F-SPC0704

SPECIMEN REQUIREMENTS

Specimen Collection

- Entire fresh seminal ejaculate collected in a sterile leak proof container by masturbation with ejaculation into the cup. Unacceptable collection: Avoid initial collection into a condom.

Storage

- Maintain at ambient or body temperature (i.e. 20-40°C). Avoid temperature extremes and direct light exposure. Do not refrigerate specimen.

Stability

- Specimen must arrive within 1 hour of collection, testing performed within 1-2 hours after collection.

Note: Samples that are delayed in delivery should not be rejected and have testing performed. Results should be reviewed by a lead tech or MT-Coordinator to evaluate if results can be released. For samples received beyond stability limits, use the LIS phrase: SP LIMIT (Semen specimen received beyond stability limit, results may be affected. Please recollect if clinically indicated.)

REAGENTS/EQUIPMENT

- Microscope with 40X objective
- Glass slides and cover slips, disposable pipettes, tips
- Centrifuge
- Test tube

QUALITY CONTROL

Patient specimen slides are prepared and examined by two different techs using individual slides. The examinations must agree on sperm presence. If sperm is present, the motility must also agree. Document review on the applicable confirmation components.

STEPS

Sperm Wet Prep

1. Mix the specimen with continuous gentle swirling to assist liquefaction.
    - If liquefaction has not occurred within 30 minutes from collection, incubate sample at 37?C for an additional 30 minutes, mixing frequently.
2. Observe the sample for signs of blood (red or brown color, with normal being white or slightly yellow, and opalescent to clear). Report as a comment in LIS if found to be abnormal.
3. Check if gelatinous clumps or contaminants are present. Add a comment in the LIS if present.
4. Apply approximately 7-10 uL of well-mixed, liquefied semen on a glass slide. Cover with coverslip. Bubbles should be avoided.
5. Prepare a second slide as performed in the previous step from a different portion of the sample.
6. Examine a minimum of 50 high power fields on each slide using the 40X objective on the microscope.
    - Note: Assure that cells or debris are visible on the slides. Note: You may consider lowering the condenser or close the condenser diaphragm until cells/debris is more visible.
7. Count the total of sperm seen within the 100 high power fields from the two slides.
8. To report Sperm, Wet Mount in the LIS, use the grading system from below:

Sperm Counted	Report in LIS
<1 (None Seen)	ABSENT
1-9 per 100 high power fields	RARE
>9 per 100 high power fields	INCREASED

9. If sperm are present, result SPERM WET as RARE or INCREASED. Result SPERM SPUN as N/A.
10. If no sperm are seen, result SPERM WET as ABSENT and continue to next section SPERM SPUN.

Sperm Spun

1. Centrifuge ½ of the specimen at 1000 rpms for 15 minutes and reexamine.
2. Repeat steps 4-7 from above.

3. If no sperm are present, report SPERM SPUN as ABSENT.
4. If sperm are seen, report as SPERM SPUN as RARE and continue with the next section.

Motile Sperm

1. If sperm are present, check for motile sperm forms. Estimate the percentage of spermatozoa moving with forward progression of one head length or more.
2. Result as:
    - NONE if no forward progression
    - FEW if 0-10% forward progression
    - MOD if >10% forward progression
    - **MANY : Note: Do not use this result choice in LIS.**

INTERFERENCES AND LIMITATIONS

- Refrigeration of specimen, use of a condom or lubricants may immobilize or kill sperm.
- Rare, non-motile sperm (RNMS) may remain for months or longer after successful vasectomy.

REFERENCE RANGE

Sperm: Absent

REFERENCES

1. Post Vasectomy Check PPM, Male Fertility Laboratory, Dept. of Urology, University of Washington, Seattle, WA.
2. American Urological Association. Guidelines for Post Vasectomy.
3. World Health Organization, WHO Laboratory Manual for the Examination of Human Semen and Sperm-cervical Mucus Interaction, 4th ed., 1999.

Attachments:

No Attachments

Approval Signatures

Approver	Date
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