



STANDARD OPERATING PROCEDURE 311 HYSTERECTOMY OF PREGNANT EWE AND STERILE DELIVERY OF LAMBS

1. PURPOSE

The purpose of this Standard Operating Procedure is to describe the surgical protocol for the hysterectomy of a pregnant Ewe and the Sterile Delivery of Lambs.

2. RESPONSIBILITY

Principal investigator (PI) and their research staff.

3. MATERIALS

- 3.1. Surgery Table.
- 3.2. Surgical Cart
- 3.3. Hair Covers
- 3.4. Shoe covers
- 3.5. Mask
- 3.6. Sterile gown
- 3.7. Sterile Pads
- 3.8. Sterile Surgical gloves
- 3.9. Sterile Pads
- 3.10. Scalpel #10
- 3.11. Mayo dissecting scissors
- 3.12. Tissue Forceps
- 3.13. Adson Forceps
- 3.14. Carmalt hemostatic forceps
- 3.15. Hemostat Clamps
- 3.16. Cutting block
- 3.17. Monofilament absorbable sutures -0- (chromic gut or PDS)
- 3.18. Needle holders
- 3.19. Skin Stapler
- 3.20. Propofol

3.21. Lactate Ringer Solution and IV line

4. PROCEDURE

- 4.1. Shear the Ewe along her left and right sides, back, and belly.
- 4.2. Perform surgical scrub, gowning, and gloving, then drape the Ewe.
- 4.3. Cut a 20cm vertical skin incision in the left flank approximately 10-12 cm ventral to the transverse processes. Use sharp dissection to cut through the abdominal muscle and fascia layers until the peritoneum is reached.
- 4.4. Make a stab incision through the peritoneum and enlarge the incision carefully to avoid accidentally puncturing the GI tract.
- 4.5. Isolate and exteriorize the uterus through the incision and determine how many fetuses it contains.
- 4.6. Gather the entire uterus and fetuses contained in the uterine horns and lay them on the drape.
- 4.7. A delivery team member lavages the uterine horns with the virusolve solution in the bath.
- 4.8. Locate the cervix, position the cutting block under the cervical neck, and rest 4 clamps across it, two from the right side and two from the left but do not close them.
- 4.9. Notify the delivery team and ask if they are ready to receive the uterus.
- 4.10. Simultaneously close all 4 clamps (this will require a surgical assistant).
- 4.11. Once the clamps are secure, incise between clamps 2 and 3.
- 4.12. Pass off the uterus to the resuscitation team, who will submerge it into the pool of virusolve at the entrance to the surgical isolator.
- 4.13. If Ewe has had significant blood loss, she should be euthanized. First, administer a bolus of propofol IV until she is unconscious. Then administer pentobarbital IV ($\geq 150\text{mg/kg}$).
- 4.14. If the Ewe is stable, maintain hemostasis by ligation of the uterine arteries of the surgical stump.
- 4.15. Close the abdominal muscles and fascia with monofilament absorbable suture -0- in a simple continuous pattern. The subcutaneous tissue can be closed using interrupted buried or simple continuous patterns.
- 4.16. Close the skin using a skin stapler.

Note: Boluses of propofol should be used to effect (3-10mg/kg) as needed as the Ewe expresses pain and/or discomfort throughout the procedure.

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Approved by the BGU Animal Policy and Welfare Oversight Committee