

Equine – Embryo transfer

Recommended instructor to student ratio: (Instructor – student ratio 1 :< 16)

Category

Teaching: 3

Research: 4 Choose an item.

Objective

Describe the standard operating procedure for transferring an embryo into a recipient mare.

Alternatives to animal use

Abattoir specimens can be used for initial training, however live animals need to be used to ensure professional standards are met.

Drugs, chemicals or biological agents

1. Acepromazine
2. Xylazine
3. Progesterone
4. Flunixin meglumine
5. Antibiotics (at the discretion of the veterinarian)
6. Propantheline bromide

Procedure

Closed-in boots must be worn when carrying out this procedure. Prior to starting, the recipient mare is restrained in a crush to reduce movement and to minimise the chance of injury to the mare or the inseminator. If required, the recipient mare may be sedated under veterinary direction. Propantheline bromide may be administered to reduce rectal straining.

1. Wrap the mare's tail using a tail bandage and tie it out of the way with a quick release knot
2. Clean her anus, perineum and surrounding areas thoroughly using the SOP – cleaning equine perineum.
3. Thoroughly dry the area when cleaning is finished
4. Treat the mare with flunixin and progesterone prior to transferring the embryo. Antibiotic use post-transfer is at the discretion of the veterinarian.
5. Load the embryo into a 0.25 mL or 0.5 mL French straw and load the straw into the appropriate embryo transfer (ET) gun (either for 0.25 mL or 0.5 mL straw)
6. The operator wears a clean palpation sleeve, with a sterile glove placed over the top. Care is taken to maintain sterility of this glove.
7. Clean, non-spermicidal lubricant is added to the back of the operator's hand ready for vaginal entry. The vulval lips are parted with assistance and the hand is entered into the vestibule rotating it slightly to spread lubricant around the circumference of the tract. The hand is then progressed towards the cervix and the index finger gently introduced through the cervix to assist with guiding the transfer gun into the body of the uterus.

8. The hand is then withdrawn from the reproductive tract, re-lubricated and inserted into the rectum to assist with guiding the tip of the gun further into the uterine body/horn where the embryo is released.
9. The hand and the ET gun are both removed from the mare, the tail wrap is removed and the mare walked back to her accommodation. Drugs are administered as prescribed.

Impact on wellbeing of animals

Other than the animal potentially becoming pregnant, this procedure causes minimal, or nil impact on animal well-being.

Animal Care

Mares should be observed for signs of discomfort for up to 30 minutes after the last procedure.

Pain Relief

Pain relief is not required for this procedure. Sedation may be used if the mare is restless.

Reuse and repeated use

In a teaching context, the procedure may be repeated up to 4 times at approximately 5 minute intervals. The repeated use of drugs listed above will not be necessary in subsequent iterations of the process.

Qualification, experience or training necessary to perform procedure

Demonstrator: Theriogenologist / Veterinarian having experience with these procedures. Thorough knowledge of the physiology, endocrinology and anatomy involved.

Students: Veterinary Science. Prior experience with handling horses and background knowledge of anatomy, physiology and endocrinology is desirable