# INGUINAL APPROACH

CRYPTORCHIDISM





https://www.youtube.com/watch?v=DiKYiv85dtk&ab

## PREPARING THE PATIENT

#### **GENERAL ANESTHESIA**

• Xylazine and Ketamine maintained using the triple drip technique

#### **POSITIONING**

• Dorsal recumbency using limb supports, inflatable cushions, foam wedges

### PREPARATION OF SITE

- Aseptic preparation of
  - o Inguinal area (Inguinal Approach)
  - Ventral abdomen (Para-inguinal Approach)

- 1. Withhold food for approximately 4 to 8 hours before surgery except in foals (Do not withhold water)
- 2. Perform a complete physical examination with emphasis on cardiorespiratory function
- 3. Determine body weight using a scale or a girth weight estimator tape (note body type e.g., lean/racing, conditioned, draft)
- 4. Groom the horse and wipe with a moist cloth to remove dander and debris
- 5. Clean the feet before induction; pull or pad shoes to prevent injury
- 6. Prepare (clip and scrub) the surgical site
- 7. Place and secure an IV catheter in a jugular vein before induction

## INGUINAL CRYPTORCHID

INTRA-OP



https://www.youtube.com/watch?v=bbsy\_L5MPt 0&has\_verified=1&ab\_channel=ThomazCoelho

### INSTRUMENTATION

- 1. General surgery pack
- 2. Sponge forceps
- 3. Emasculator

### **TECHNIQUE:**

- 1. Make a 12-15cm skin incision over the external inguinal ring
- 2. Continue through superficial fascia and bluntly dissect with fingertips to separate the subcutaneous inguinal fascia and expose the external inguinal ring.
- 3. Continue dissecting beyond the external inguinal ring
- 4. Dissect through the inguinal canal until the vaginal ring is located
- 5. Isolate the common tunic and remove the testis using a close castration technique
- **6.** Close the external inguinal ring with a large-diameter synthetic absorbable suture material in a preplaced interrupted pattern
- 7. Close the dead space using a no. 2-0 synthetic absorbable suture material
- **8.** Suture the skin with a synthetic absorbable suture with simple interrupted sutures with long ends.

## ABDOMINAL CRYPTORCHID

INTRA-OP



https://www.youtube.com/watch?v=lfGxnA04tM c&ab\_channel=ThomazCoelho

The intra-op procedure for an abdominal cryptorchid surgery is similar to steps 1-4 of the aforementioned Inguinal approach to the inguinal cryptorchid.

- 1. Make a 12-15cm skin incision over the external inguinal ring
- Continue through superficial fascia and bluntly dissect with fingertips to separate the subcutaneous inguinal fascia and expose the external inguinal ring.
- 3. Continue dissecting beyond the external inguinal ring
- 4. Dissect through the inguinal canal until the vaginal ring is located

- 5. Introduce a curved sponge forceps carefully through the inguinal canal, advancing it through the vaginal ring into the vaginal process
- 6. Press the partially opened jaws of the forceps against the vaginal process, when the forceps close against the vaginal process grasp the vaginal process and gubernaculum testis
- 7. Withdraw the forceps carefully, without rupturing the vaginal process
- 8. Palpate the gubernaculum within the everted vaginal process by rolling it between thumb and forefinger
- 9. Using a Metzenbaum scissors open the vaginal process, graps the gubernaculum with Ochsner forceps.

- 10. Apply traction to the gubernaculum to exteriorize the tail of the epididymis, pulling the testis through the vaginal ring
- 11. Emasculate the testis (nut to nut) after identifying the structure.
- 12. If the testis cannot retracted for emasculation ligate the cord and sharply amputate the testis
- 13. Close the external inguinal ring with a large-diameter synthetic absorbable suture material in a preplaced interrupted pattern
- 14. Close the dead space using a no. 2-0 synthetic absorbable suture material
- 15. Suture the skin with a synthetic absorbable suture with simple interrupted sutures with long ends.

## PARAINGUINAL APPROACH

## CRYPTORCHIDISM

## PARAINGUINAL APPROACH

## INTRA-OP

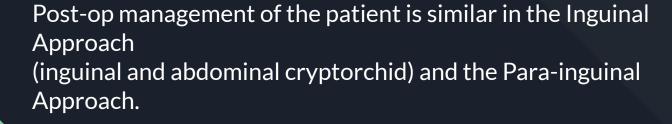
### INSTRUMENTATION

- 1. General surgery pack
- 2. Sponge forceps
- 3. Emasculator
- 4. Spay hook (parainguinal approach)

### **TECHNIQUE:**

- 1. Make a 10cm incision through the skin parallel to and 4cm axial to the inguinal canal
- 2. Explore the inguinal canal to assess the presence of an inguinal testis.
- 3. If no inguinal testis is present make a 10cm incision into the external rectus sheath (no deeper)
- 4. Bluntly divide the rectus abdominus muscle and bluntly penetrate the internal rectus sheath along with the peritoneum
- 5. Place a spay hook through the incision into the peritoneal space
- 6. Sweep the tip of the spay hook through the region of the vaginal ring, picking up the gubernaculum

- 7. Remove the gubernaculum from the abdomen and place traction | until the testis is removed from the abdomen
- 8. Emasculate the testis
- 9. Close the external rectus sheath in a simple continuous pattern using no.1 polyglyconate
- 10. Close the subcutaneous tissue and skin using a no. 2-0 synthetic absorbable suture material in a simple continuous pattern



- Administer tetanus immunization
- Routine post castration management
  - Clean any blood or discharge around incision
- Hospitalize for 72 hours if the inguinal canal was closed with sutures
- Exercise the horse after 2 weeks

