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Standing Equine Penile Amputation

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Partial phallectomy performed with the horse standing

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Partial phallectomy can be performed with the horse sedated, rather than anesthetized, if the horse is a poor candidate for general anesthesia or if the cost of anesthesia makes the procedure economically unfeasible. To perform partial phallectomy with the horse sedated, the penis must be desensitized, at least at the site of amputation. To desensitize the penis for partial phallectomy, local anesthetic solution can be instilled subcutaneously, circumferentially proximal to the site of amputation or the pudendal nerves can be anesthetized. To anesthetize the pudendal nerves, a 1.5-inch (3.8-cm), 20- to 22-gauge needle is inserted on both the right and left sides of the penis where the penis curves around the ischium. The point of the needle is angled medially, aiming for a point on the ischium slightly lateral to the midline, until the point of the needle contacts the ischium. Penetrating the dorsal aspect of the penis with the needle seems to cause no complications. The tip of the needle usually must contact the ischium for the block to be effective. The penis usually protrudes within 5 minutes after 5 mL of local anesthetic solution is deposited at each site. The horse is sedated using an α 2-agonist either alone or in combination with butorphanol. The urethra is catheterized with an equine male urinary catheter, and the catheter is held in place with a hypodermic needle inserted through it and the urethral process. Alternatively, the catheter can be held in place by suturing the urethral process to the catheter. A Nye tourniquet or Penrose drain tied tightly around the penis proximal to the proposed site of transection facilitates surgery by decreasing hemorrhage. The penis is amputated using Vinsot's procedure, William's procedure, or Scott's procedure. The simplest technique of partial phallectomy is Vinsot's procedure, which can be modified to make it even simpler.

To perform partial phallectomy using Vinsot's procedure, a triangular section of tissue that includes epithelium, bulbospongiosus muscle, and corpora spongiosum penis is excised from the ventral aspect of the penis proximal to the proposed site of transection, taking care not to incise the urethral mucosa. The base of the triangle is about 2.5-cm wide the sides are about 4-cm long. The apex points distally and is located about 5 cm proximal to the proposed site of amputation. The exposed urethra is incised on its midline from the apex to the base of the triangle, and the right and left margins of the urethral incision are sutured to the epithelial border of the triangle with 2-0 simple-interrupted or simple-continuous, absorbable sutures that include the tunica albuginea of the corpora spongiosum penis (CSP). A simple-continuous suture pattern is more effective than a simple-interrupted suture pattern in compressing the erectile tissue of the corpora spongiosum penis. Sutures should be closely spaced to compress the corporeal tissue.

The technique of creating a urethral stoma can be simplified by making a 4- to 5-cm longitudinal incision into the urethral lumen rather than removing a triangle of tissue overlying the urethra. The incised edges of the urethra and the integument are apposed with simple-interrupted or simple-continuous, absorbable sutures that incorporate and compress the cavernous tissue of the corpora spongiosum penis.

If surgeon intends to leaves the stump unsutured to heal by secondary intention, a tightly fixed, nonabsorbable ligature, such as a strand of umbilical tape, is placed around the penis 2 to 3 cm distal to the apex of the triangle to prevent hemorrhage from the corporeal tissue and

from the penile vasculature, before the penis is transversely severed 1 to 2 cm distal to the ligature. Hemorrhage from the stump can also be prevented by using a bander castration device (Callicrate Bander, No-Bull Enterprises, St. Francis, Kansas) with a latex loop (ES-10, No-Bull Enterprises, St. Francis, Kansas).

If the penile stump is to be sutured, vessels in the fascia on the dorsal and lateral aspects of the penis are ligated with absorbable suture proximal to the proposed site of transection, and the diseased portion of the penis is removed distal to these ligatures with a wedge-shaped incision. The corporeal bodies are compressed with heavy, absorbable sutures placed through the tunica albuginea of each body in an everting or appositional pattern, and the penile or preputial integument is sutured with absorbable or nonabsorbable sutures placed in similar pattern. The horse should receive an antimicrobial drug and an anti-inflammatory drug prior to surgery and continued for at least several days after surgery.

Hemorrhage from the penile stump, especially at the end of urination, should be expected for at least several days after partial phallectomy. Hemorrhage usually emanates from the CSP. A complication of Vinsot's procedure or its modification is the tendency for some horses to develop urine-induced, contact dermatitis of the medial aspect of one or both pelvic limbs.