

Chapter 1 : Urogenital - Oakham Veterinary Hospital

Surgery of the urogenital tract involves any type of surgical procedure that involves either the urinary or reproductive systems. The most common procedure performed on the male horse, by far is castration.

While these attributes are very important in any soft-tissue procedure, they are critical in urogenital surgery. The urogenital anatomy is characterized by an excellent blood supply. However, a disadvantage of this increased blood supply is the need for hemorrhage control in the surgical field. Excess bleeding increases the risk of imprecise incision and dissection with extended surgical time which, ultimately, leads to prolonged healing times. The following two urogenital surgeries illustrate the use of the CO₂ laser for soft-tissue surgery in highly vascularized areas.

Preputial plasty for feline phimosis utilizing CO₂ laser

Patient: A 2-year-old neutered male cat was presented for an evaluation for a possible perineal urethrostomy. The owner had adopted this cat as a neonate, part of a litter of three kittens. The owner noted that the two female kittens constantly nursed on this male. The patient was neutered at the age of six months. As the cat reached maturity, the owner noticed some stranguria and vocalization in the litter box. After exiting the litter box, the cat was dripping urine. Physical exam revealed that the patient had a very small preputial orifice of approximately 1 mm. No other abnormalities were noted. His laboratory test, including BUN, creatinine, phosphorus and urinalysis were normal. Phimosis is defined as the inability of the penis to protrude from the prepuce. A degree prepuce plasty was recommended to enlarge the stenotic preputial opening. Preparing to incise prepuce. The adjustable tipless handpiece is set to 0. Measuring preputial length to penis. Suturing skin to mucosa. Surgery was performed under general anesthesia. The patient was pre-medicated with glycopyrophosphate, acepromazine and torbutrol for pain control. An IV catheter with fluids was used. Anesthesia was induced and maintained with sevoflurane. The Aesculight CO₂ laser settings included a 0. Figures 1B, 1D and 1E show the adjustable tipless laser handpiece. After surgical clip and prep, with the patient in ventral recumbency, a degree full-thickness incision was performed at the mucocutaneous junction of the preputial opening Figures 1B-1D. A small portion of the prepuce was removed, allowing visualization of the penis and prepuce Figure 1E. The amount of preputial tissue removed should allow normal protrusion of the penis during urination without causing a permanently exposed penis, which could, in turn, result in chronic penile irritation Figure 1F. The penis and prepuce were inspected for other injuries or defects. Once the correct amount of prepuce was removed, the preputial mucosa was sutured to skin in a single interrupted pattern using polydioxanone suture material Figure 1G. Note that the only hemorrhage observed during the surgery was from the suture. Figure 1H shows an immediately post-operative view of the surgical site. The patient recovered from anesthesia without complications. Therapy laser was used immediately post-operatively. An E-collar was placed on the patient. He was able to urinate normally without pain in the litter box as soon as he recovered from anesthesia. He was discharged the day following surgery, and the sutures were removed at 10 days. Follow-up examination at six months post-operatively was normal.

Surgical CO₂ laser excision of penile neoplasm in a dog. A year-old neutered male Labrador retriever was presented for a preputial swelling and bleeding from the prepuce. Physical exam revealed circular swelling on the ventral surface of the prepuce and dried blood at the preputial opening. Retraction of the prepuce revealed a raised oblong hemorrhagic mass located at cm on the ventral surface of the proximal penis Figure 2A. Fine-needle aspiration biopsy revealed atypical round cells. No other abnormalities were noted on physical exam and laboratory test. Excisional biopsy was performed in order to establish a definitive cellular diagnosis and provide a possible surgical solution. Pre-op view of penile mass. Initial incision around mass. Anesthesia and procedure preparation: While under general anesthesia, the patient was prepped for the surgery and positioned in ventral recumbency. The prepuce was flushed and retracted. A urethral catheter was placed to prevent inadvertent incision into the urethra. The tipless fixed spot size 0. The mass was carefully excised using a full-thickness incision of the tunica albuginea Figure 2B-2C. Careful dissection over the urethra was necessary to avoid perforation. The excision was essentially bloodless. The edges of the tunica albuginea were apposed with polydioxanone. Most of the hemorrhage observed resulted from sutures Figure 2D. The urethral catheter was removed and patient

recovered from anesthesia without complications. He urinated without pain or blood the day of surgery. Post-operative care and follow-up exams: NSAIDs were prescribed post-operatively. Suture removal was performed 10 days post-surgically, and the incision site was perfect. Histopathological analysis revealed the neoplasm was a plasmacytoma with narrow clean margins. Although plasmacytomas can recur and metastasize, the owner elected conservative treatment. We recommended monthly re-checks for four months and every third month for two years. The patient was tumor-free at five months post-operatively. Diminished hemorrhage and minimal tissue damage I have used a CO2 laser in my practice for more than 15 years, since Two goals of soft-tissue surgery are early return to function and anatomic cosmesis. He has lectured on CO2 laser surgery and therapy lasers. He is currently using his third CO2 laser. Incision properties and thermal effects of three CO2 lasers in soft tissue.

Chapter 2 : Services Equine Surgery - Dr Nick Kannegieter and Dr Hadley Willsallen Specialist Equine Sur

Urogenital surgery in horses includes routine elective procedures, such as castration in the male horse, corrective procedures in the breeding stallion or broodmare, emergency Cesarean section for mares with dystocia, as well as urogenital tumor removal in mares, stallions, and geldings.

Chapter 3 : Urogenital Surgery

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Chapter 4 : Bovine and equine urogenital surgery.

Standing Male Equine Urogenital Surgery Aric Adams, DVMa, , Dean A. Hendrickson, DVM, MSb Given that male urogenital surgeries are among the most common soft tissue surgeries performed in horses, it is beneficial for the equine practitioner to be familiar.*

Chapter 5 : Equine Surgery â€“ BREC

The focus of this article is the standing laparoscopic cryptorchidectomy, the most common laparoscopic procedure performed on the male equine urogenital tract. Advantages, disadvantages, instrumentation, and general procedure are discussed.

Chapter 6 : Myhre Equine Clinic - Surgery

Urogenital surgery includes any surgical procedure performed on the urinary or reproductive tract of horses. These procedures range from routine castrations to removal of bladder stones and everything in between.

Chapter 7 : Surgery â€“ Georgia Equine Veterinary Services

Each equine surgery faculty veterinarian sees all types of elective and emergency surgical conditions including orthopedic (wound, fractures, arthroscopy), gastrointestinal (colic), reproductive (ovariectomy, cesarean section, male urogenital), minimally invasive (arthroscopy, laparoscopy), and airway surgery.

Chapter 8 : The CO2 laser in urogenital surgeries

Surgery With Dr. Myhre's 40 years of surgical and lameness experience, combined with Myhre Equine Clinic's state-of-the-art advanced veterinary imaging services, you can rest assured knowing your horse will receive the very

finest care available.

Chapter 9 : Surgical Services

General Surgery Our Blueberry Farm clinic is an RCVS Tier 3 accredited hospital with a fully equipped surgical theatre, recovery box, facilities for standing surgery and round-the-clock in-patient care and monitoring.