VAGINECTOMY: INDICATIONS, TECHNIQUES AND OUTCOMES
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Key points
- Benign vaginal tumors (typically leiomyomas) should be managed by local resection achieved by episiotomy combined with OHE to prevent recurrence.
- More extensive benign masses and malignant tumors (typically leiomyosarcomas) may dictate total vaginectomy.
- Total vaginectomy is most readily performed using a combined abdominal and vestibular approach without pubic disruption.
- The prognosis for malignant vaginal tumors following compartmental resection is favorable.

Vaginal disorders are uncommon in bitches and include benign or malignant neoplasms, vaginitis, vaginal prolapse and congenital abnormalities. Vaginal tumors are reported in 0.85 - 3 % of tumor-bearing bitches and 73 - 94 % of these are benign with leiomyoma the predominant histological type. Leiomyomas appear to be sex hormone dependent; most originate from the wall of the vagina, are usually pedunculated and develop intraluminally. Most benign tumors are therefore amenable to management by local resection via episiotomy combined with ovariohysterectomy to prevent recurrence. Leiomyosarcoma and transmissible veneral tumors are the most commonly reported malignant neoplasms of the vagina and unlike benign tumors, they tend to be broad based and infiltrative, often requiring more extensive surgical resections. Extensive benign and malignant vaginal tumors may therefore dictate total vaginectomy; techniques for this usually combine an episiotomy approach with laparotomy augmented by pubic osteotomy or ostectomy. However, total vaginectomy can be successfully achieved by a combination of posterior laparotomy with episiotomy whilst resulting in considerably less morbidity.

Abdominal procedure: Make a conventional caudal laparotomy approach extending from umbilicus to pubis; perform routine ovariohysterectomy in entire bitches and retroflex the bladder to gain exposure to the vagina and associated structures. Resect the fascial and peritoneal attachments between the vagina and the rectum within the rectogenital pouch. Similarly, dissect the attachment between the vagina and the urethra within the vesicogenital pouch avoiding any disruption of the craniolateral aspect of the urethra and the peri-urethral tissues. Identify and preserve the integrity of the ureters and the urethral innervation. Ligate the cranial and caudal branches of the vaginal artery and vein and bluntly dissect the peri-vaginal tissues as far caudally as possible ensuring that no residual vascular supply or fascial attachment remains intact. Place a transfixing stay suture with a large loop anchored through all layers of the cranial opening of the vagina; pass the loop of the suture was passed into the vaginal lumen. Close the laparotomy.

Vaginal procedure: Position the patient in sternal recumbency with the hindquarters elevated and the pelvic limbs extended caudally over the edge of the table. Make a dorsal midline episiotomy incision and achieve hemostasis using a combination of electrocoagulation and compression of the vestibular wall using two Doyen bowel clamps positioned with one blade in the vestibular lumen and one on the skin surface. Expose the cranial vaginal lumen further by placement of Gelpi retractors. Identify the loop of the transfixing stay suture in the vaginal lumen and retracted caudally, withdrawing the cranial vagina to the episiotomy site. Bluntly dissect the vagina from its pelvic retroperitoneal fascial attachments and ligate any residual vascular supply to the cranial vagina. Appose the perivaginal tissues using layers of single interrupted absorbable sutures. Identify the urethra
during this procedure to ensure that it is not included. If the urethral orifice and distal urethra is involved in the disease process, resect the diseased tissue and perform urethroplasty in the vestibule with single interrupted sutures. Perform routine closure of the episiotomy wound in three layers.

Postoperative management: Maintain an indwelling urinary catheter attached to a closed urinary collection system for at least 24hrs postoperatively. Provide appropriate postoperative analgesia employing opiate and NSAID agents.

Prognosis: The combined abdominal and vestibular approach consistently achieves total vaginectomy for management of extensive intramural lesions and is associated with a low incidence of significant intra-operative or postoperative complications. The prognosis following resection of benign vaginal disease is very favorable and survival times for bitches with malignant vaginal tumors exceed one year.