

Perianal Tumor

Associated Terms: circumanal tumors, hepatitis tumor, anal sac tumors
“apocrine gland tumor.”

OVERVIEW

Perianal glands are modified sebaceous glands. The most common perianal tumors are adenomas & carcinomas of the perianal & apocrine glands. Apocrine gland tumors usually involve the anal sacs. Perianal glands are located primarily around the anus & base of the tail; however, they are also found in the thigh, prepuce & dorsal & ventral midline from the base of the skull to the umbilicus. Perianal tumors may occur at any of these locations.

Androgen & estrogen hormone receptors & growth hormone have been identified in both perianal gland adenomas & adenocarcinomas. The most common malignant tumors are perianal gland adenocarcinomas & apocrine gland adenocarcinomas.

Perianal adenomas are the most common canine perianal tumors (80%). They are the third most frequent tumor in male dogs. They occur 12 times more often in intact males than in intact females & are more common in ovariohysterectomized females than in intact females. They are hormone dependent & usually diminish in size after castration. They may be single or multiple & are usually small, raised, firm & well circumscribed; however, some are large & ulcerated. Many dogs with perianal adenomas also have testicular interstitial cell tumors “testicular tumor.”

Perianal gland adenocarcinomas cannot be grossly differentiated from adenomas. They are usually solitary, ulcerated & locally invasive & can be confused with perianal fistulae or anal sacs that have ruptured or are impacted. These tumors are not hormone responsive. Both primary & metastatic sites grow more slowly than many other malignancies. They usually metastasize to the intrapelvic & sublumbar lymph nodes. Other metastatic sites include the liver, lungs, kidneys, spleen, bone & abdominal lymph nodes.

Anal sac apocrine gland adenocarcinomas (anal sac adenocarcinoma, apocrine gland adenocarcinoma) arising in the anal sac account for ~ 2% of skin tumors in dogs. Most patients have unilateral tumors. These tumors can cause hypercalcemia of malignancy with subsequent polyuria, polydipsia, poor appetite &/or vomiting. Anal sac adenocarcinomas initially grow slowly & are confined to the anal sac; however, invasion into surrounding tissues, the rectum & the pelvic canal occurs with continued growth. Most show evidence of stromal & lymphatic invasion. Metastasis to the iliac, sacral, & sublumbar lymph nodes may occur. Distant metastasis may occur anywhere, but lungs, liver & spleen are the most common sites.

Note: suspect perianal gland adenomas in male dogs. Suspect anal sac adenocarcinomas if the dog is hypercalcemic.

Anal SCCs arise from the anocutaneous line. They are typically malignant & metastasize quickly. Extensive fistula or mucosal-cutaneous, ulcer-like lesions occur & are often covered with mucus. Anal function is impaired & pain, tenesmus & hemorrhage are typical. The prognosis is grave because of their malignant nature. Treatment is often discouraged.

Common Tumors of the Perianal Region

- Perianal gland adenoma
- Perianal gland adenocarcinoma
- Apocrine gland adenocarcinoma
- Lipoma
- Leiomyoma
- Squamous cell carcinoma
- Melanoma
- Lymphoma
- Mast cell tumor
- Miscellaneous skin tumors

CLINICAL SIGNS & SYMPTOMS

Signalment

Perianal tumors are common in middle-aged or older male dogs but rare in females. The median age for anal sac apocrine gland adenocarcinoma is ~10 years. Adenomas are more prevalent in cocker spaniels, beagles, bulldogs & Samoyeds. Cats do NOT have perianal or circumanal glands. Apocrine gland adenocarcinomas usually occur in older dogs. There appears to be no sex predisposition.

History

Tumors in the perianal region cause irritation with subsequent licking, scooting & tenesmus. Continued growth of the tumor or excoriation of the thin perianal skin causes mild hemorrhage, which may be noted in the feces or where the animal sits. Constipation, obstipation & dyschezia may occur with large, invasive tumors. Some tumors are asymptomatic & found incidentally on a physical examination.

Benign tumors are usually slow-growing & painless.

Malignant tumors are usually fast-growing, firm & invasive & are commonly ulcerated.

Perianal tumors in castrated males should be considered malignant until proved otherwise.

Paraneoplastic hypercalcemia is common with anal sac adenocarcinomas; polyuria, polydipsia, anorexia &/or vomiting secondary to renal failure may be seen, depending on the magnitude of the hypercalcemia. Fecal incontinence may occur with aggressive tumors. Other signs that may be associated with metastatic lesions are chronic cough, limb edema & urethral & rectal obstruction. Some anal sac adenocarcinomas are asymptomatic, being found incidentally during routine examinations.

Signs of Hypercalcemia

- Anorexia
- Weight loss
- Vomiting
- Polyuria
- Polydipsia
- Muscle weakness
- Constipation

Physical Exam Findings

Multiple perianal masses are often identified around the circumference of the anus in the hairless area. They may vary in size & may be covered with epithelium or ulcerated, friable, & broad based. Most adenomas are well circumscribed, whereas carcinomas are invasive. Careful palpation of the perianal tissues during rectal examination often identifies masses that are difficult to visually differentiate from normal perianal tissue.

Anal sac tumors are not always obvious when the anal sacs are palpated.

Note: check the sublumbar & other regional lymph nodes for enlargement & asymmetry.

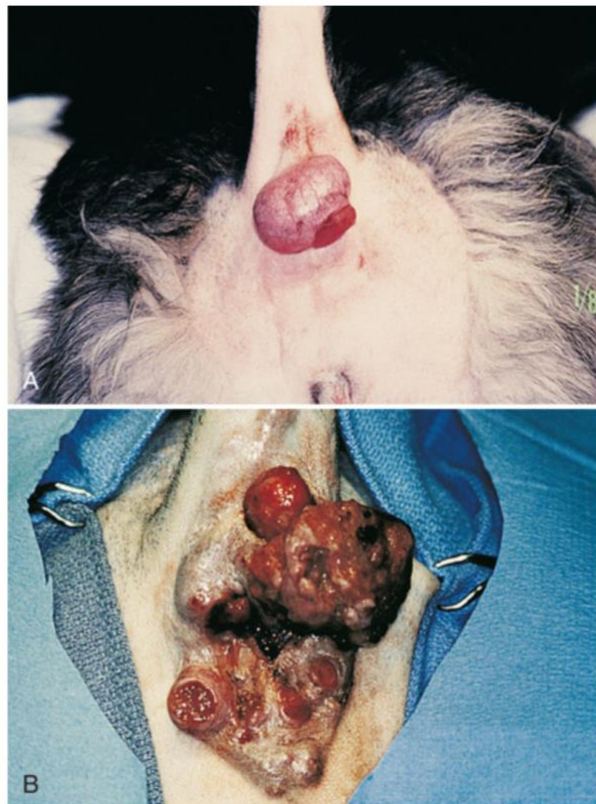


FIG. 18.141 Perianal tumors. (A) A single tumor with partially intact epithelium. (B) Multiple ulcerated perianal tumors.

DIAGNOSTICS

Radiographs of the abdomen & thorax are used to help stage the disease.

Enlarged sublumbar lymph nodes suggest metastasis.

Abdominal UltraSonography (AUS) allows evaluation of lymph nodes.

CT can be used to help determine tumor size & invasiveness.

Laboratory Findings

Cytologic studies help, but histologic examination is necessary to differentiate perianal adenomas from carcinomas. However, it can be difficult to distinguish between benign & malignant tumors, even with histopathologic tissue biopsy examination.

Anal sac tumors often exfoliate well for cytologic evaluation & may cause hypercalcemia of malignancy (~30%–50%) & renal dysfunction. The total serum calcium concentration is affected by the serum total protein & serum albumin concentrations. Although there are formulas to correct the total serum calcium concentration for changes in the serum albumin concentration, it is much more accurate to measure ionized serum calcium. Renal dysfunction is common in these hypercalcemic patients & it is important to measure serum creatinine & perform a urinalysis on urine obtained prior to fluid therapy. Some hypercalcemic patients are also hypophosphatemic.

Differential Diagnosis (DDx)

1. Anal & Perianal Irritation include anal sacculitis, dermatitis, endoparasites, perianal fistula, fungal infection or tumors.
2. Perianal Swelling include perineal hernia, perianal neoplasia, perianal gland hyperplasia, anal sacculitis, anal sac neoplasia, atresia ani, rectal pythiosis & vaginal tumors.
3. Dyschezia (painful defecation) include rectal foreign body, perineal hernia, perianal fistula, anal stricture, rectal stricture, anal sac abscess, rectal or anal neoplasia, anal trauma, anal dermatitis, anorectal prolapse, IBD (Inflammatory Bowel Disease), histoplasmosis (fungal disease) & pythiosis.

TREATMENT

MEDICAL Management

Some perianal tumors respond to chemotherapy or radiation therapy, but reports documenting the effectiveness of these treatments are lacking.

Perianal gland adenomas may shrink after a short course of diethylstilbestrol (0.5–1 mg daily for 1–2 weeks).

Radiation therapy or chemotherapy is recommended for non-resectable malignancies. Radiation or chemotherapy may convert a marginally operable tumor to an operable tumor.

Other recommendations include vincristine, doxorubicin, & cyclophosphamide (VAC) or melphalan, mitoxantrone, carboplatin, or cisplatin.

SURGICAL Treatment

Surgical excision is the treatment of choice for perianal tumors. Generally, perianal masses that do NOT involve the anal sacs are perianal adenomas; therefore castration & resection of small masses or biopsy of multiple or large masses is recommended. Patients should be reevaluated 4 to 6 weeks after castration & biopsy. Adenomas will be smaller at this time & can generally be resected with less trauma to the external anal sphincter. Some adenomas regress completely after castration.

Prompt, wide resection of malignancies is recommended.

AFTERCARE & OUTCOME

The perianal area should be kept clean & an Elizabethan collar (e-collar) or similar restraint device should be used to prevent the patient from licking at surgical sites. Animals that are not vomiting may receive water & food within 8 to 12 hours after surgery. A stool softener may be added to the food for 2 to 3 weeks.

Chemotherapy may slow recurrence & metastatic tumor growth, but its efficacy is unknown.

The rectum & perianal area should be palpated for evidence of stricture or tumor recurrence when the sutures are removed at ~14 days.

Patients with malignancies should be reevaluated for recurrence or metastasis at 2, 4, & 6 months & then yearly.

Rectal palpation, measurement of serum ionized calcium & imaging (e.g., abdominal radiography, CT, or ultrasonography) are indicated during reevaluation.

Recurrence of malignant tumors is often detected by 3 months after surgery.

Possible complications of perianal surgery are listed below.

Possible Complications of Surgery for Perianal Tumors

- Infection
- Dehiscence
- Tenesmus
- Rectal prolapse
- Dyschezia
- Hematochezia
- Temporary or permanent incontinence
- Anal stricture
- Tumor recurrence
- Metastasis

PROGNOSIS

Prolonged estrogen therapy is not recommended because of its myelotoxic effects & its temporary effects on tumor size.

Radiation therapy is an option, but surgery is less expensive, faster, & safer. The prognosis after surgery is good for benign perianal tumors but guarded to poor for malignant tumors, although some malignant tumors may be slow-growing & late to metastasize.

Palliation for non-resectable malignant tumors may involve partial resection, cryosurgery, chemotherapy or radiation therapy.

The prognosis for perianal gland adenomas is good to excellent after castration. Adenomas occasionally recur (<10%) & should be rebiopsied. Early, complete excision of perianal gland adenocarcinomas can be curative, but most carcinomas are invasive or metastasize to lymph nodes. Recurrence is common, although it may take many months; therefore the prognosis is poor.

Anal sac adenocarcinomas in dogs classically warrant a poor prognosis because they have frequently metastasized by the time of diagnosis. Recurrent hypercalcemia suggests recurrence or metastasis. If metastasis is present, survival of less than a year can be expected.

If you have any questions, feel free to reach out to your primary veterinarian &/or your veterinary surgeon.

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