Mammary Gland Enlargement in Male Dogs

Valeria M. Tanco, DVM, MSc, PhD, DACT
Charleston Veterinary Referral Center
Charleston, South Carolina

GYNECOMASTIA OBSERVED

Neutered

INVESTIGATION
Obtain history & perform physical examination to check for:
- Polyuria/polydipsia
- Recurrent skin/urinary tract infections
- Alopecia (non-pruritic, bilateral, symmetrical)
- Panting
- Temporal muscle atrophy
- Polyphagia
- Abdominomegaly
- History of exposure to exogenous hormones (eg, human estrogen cream/spray)†

INVESTIGATION
Perform diagnostic testing:
- CBC, serum chemistry profile, urinalysis
- Abdominal ultrasonography
- ACTH stimulation test/low-dose dexamethasone suppression test/urine cortisol:creatinine ratio (home-caught urine sample)
- Measure total T4, cTSH levels

DIFFERENTIAL
Endocrinopathy
- Hyperadrenocorticism
- Hypothyroidism (less likely)

Intact

INVESTIGATION
Examine for other signs of feminization:
- Alopecia (hyperpigmented, bilateral, nonpruritic)
- Pendulous prepuce
- Decreased penile size
- Attraction to male dogs
- Female positioning for urination
- Potential cryptorchid
- Abdominomegaly

INVESTIGATION
Perform testicular/diagnostic examination:
- CBC, serum chemistry profile, urinalysis
- Abdominal ultrasonography
- ACTH stimulation test/low-dose dexamethasone suppression test/urine cortisol:creatinine ratio (home-caught urine sample)
- Measure total T4, cTSH levels
- Palpation
- Ultrasound (testes, abdomen, inguinal area)*
- Preputial cytology for functional testicular neoplasia (intact, cryptorchid)
- Biopsy of mass/castration of testicle/histopathology
- FNA/cytology of testicles, inguinal lymph nodes

DIFFERENTIAL
Endocrinopathy
- Hyperadrenocorticism
- Hypothyroidism (less likely)

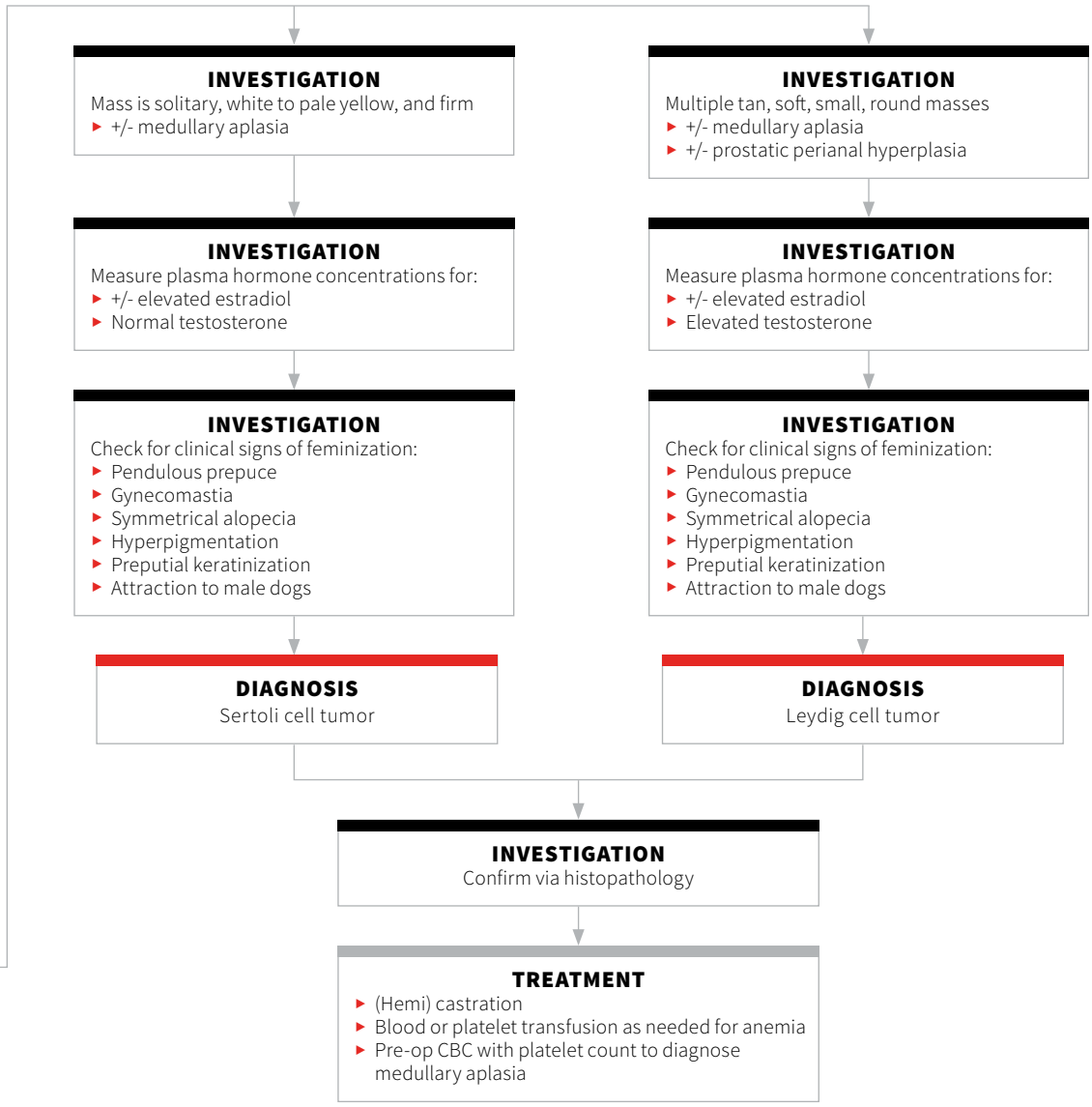
Normal

INVESTIGATION
Check for patient history of exposure to exogenous hormones (eg, human estrogen cream/spray)†

Abnormal testicular cytology/biopsy

*Tumor type cannot be differentiated on ultrasound.

†Patient contact with humans who use such preparations should be explored, as it can be causative.


INVESTIGATION
Mass is solitary, white to pale yellow, and firm
+/- medullary aplasia
INVESTIGATION
Measure plasma hormone concentrations for:
+/- elevated estradiol
Normal testosterone
INVESTIGATION
Check for clinical signs of feminization:
Pendulous prepuce
Gynecomastia
Symmetrical alopecia
Hyperpigmentation
Preputial keratinization
Attraction to male dogs
DIAGNOSIS
Sertoli cell tumor
INVESTIGATION
Multiple tan, soft, small, round masses
+/- medullary aplasia
+/- prostatic perianal hyperplasia
INVESTIGATION
Measure plasma hormone concentrations for:
+/- elevated estradiol
Elevated testosterone
INVESTIGATION
Check for clinical signs of feminization:
Pendulous prepuce
Gynecomastia
Symmetrical alopecia
Hyperpigmentation
Preputial keratinization
Attraction to male dogs
DIAGNOSIS
Leydig cell tumor
INVESTIGATION
Confirm via histopathology
TREATMENT
(Hemi) castration
Blood or platelet transfusion as needed for anemia
Pre-op CBC with platelet count to diagnose medullary aplasia