A POSSIBLE PARANEOPLASTIC THROMBOCYTOPENIA IN A MALE DOG

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Abstract: A male dog (9 years) which presented a prostatic neoplastic process was emasculated after estrogen therapy. A very important bleeding was inregistrated postsurgical.

INTRODUCTION

The canine is the only species other than man that has a male accessory sex gland, the prostate, which commonly develops spontaneous disease. The canine prostate gland is a bilobed structure with a palpable median raphe, which completely surrounds the urethra just distal to the internal sphincter. The gland is mostly in the retroperitoneal space, and usually resides within the pelvic canal at the pelvic inlet.

There are four major disorders of the canine prostate gland. Benign prostatic hyperplasia (BPH) is the most common and this disorder has hormonal, pathophysiological and clinical similarities to BPH in man although there are some interesting differences.

Dogs can also develop bacterial prostatitis, paraprostatic cysts, and prostatic neoplasia. Subcategories of disease are prostatic cysts (usually a complication of BPH), and prostatic abscesses (a complication of bacterial prostatitis and/or infected cysts).

MATERIAL AND METHOD

Clinical Manifestations

History. The patient was a male dog of 9 years with either lower urinary tract signs (pollakiuria, dysuria, hematuria) and/or lower bowel signs (tenesmus, hematochezia, constipation). In addition, the dog presented a hemorrhagic and purulent urethral discharge, a common sign of prostatic disease. It also presented a large edematous formation which included the whole perineum and scrotum (fig. 1).

Physical Examination. The prostate gland was palpated per rectum.

In normal conditions the gland is smooth and moderately firm but not hard in texture, is somewhat movable, and has a palpable median raphe. The gland is located within the pelvic canal or at the brim of the pelvis. The normal gland is larger in older dogs than in juveniles and the Scottish terrier is known for having a larger than average prostate gland.

In this case the gland was abnormally enlarged, there was pain on palpation and it had falled into the abdominal cavity. The male presented urinary retention (a distended, painful urinary bladder) and constipation, secondary to prostatic disease. The lymph nodes located in the sublumbar area could be palpated.
Diagnostic Evaluation

Abdominal ultrasound evaluation of dogs have become indispensable for evaluation of the abnormal canine prostate gland. Cysts, abscesses, size, echogenic texture, and changes suggestive of BPH or neoplasia can all be evaluated. The ultrasound does not diagnose the cause of the prostatic disease but is an important tool along with other diagnostic tests. Ultrasound can be used to guide aspirates of abnormal areas within the prostate gland for cytology and culture and can be used to guide a needle biopsy (tru-cut) of the gland, if warranted.

Our dog manifested prostatomegaly and the ultrasound image showed a neoplastic process (fig. 2).

Therapy and evolution of the case

The dog received Oestradiol benzoate (*Mesalin*®) 0.03 mg/kg, monthly, for 3 months to antagonize the androgens. After this interval it was emasculated.

In short time after surgery, an important capillary hemorrhage started, despite the antihemoragic protocol applied at the beginning of the intervention.

Only the high doses of antihemoragics and corticosteroids were able to stop the hemorrhage and reduce the edema.
RESULTS AND DISCUSSIONS

- In this case the bleeding was the expression of a paraneoplastic syndrome.
- Hematologic abnormalities are common in veterinary patients with cancer, the most commonly seen changes include anemia, thrombocytopenia, erythrocytosis, neutrophilia, coagulopathies and DIC.
- Thrombocytopenia is commonly seen with neoplasia. A variety of tumours have been reported to cause DIC, however hemangiosarcoma is the most common one, followed by inflammatory mammary gland carcinomas, thyroid and intra-abdominal carcinomas/adenocarcinomas.
- Bleeding from a platelet disorder is usually localized to superficial sites such as the skin and mucous membranes, comes on immediately after trauma or surgery and is readily controled by local measures. In contrast, bleeding from secondary hemostatic or plasma coagulation defects occurs hours or days after injury and is unaffected by local therapy. Such bleeding most often occurs in deep subcutaneous tissue, muscles, joints or body cavities.
- The bleeding could not be a side-effect of Mesalin®, because the hormone was administrated 1 month ago.