

SERTOLI CELL TUMOR IN AN INTACT MALE SWISS MOUNTAIN TERRIER DOG - A CASE REPORT

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Testicular neoplasia is the second most common tumor types in male dogs, after skin tumor. Neoplasia of the testis occurs in approximately one percent of entire male dogs and comprises of 91 percent of male genital system. Sertoli cell tumors are one of the most common and well known testicular tumors, especially because of their propensity to induce a feminization syndrome. Although dogs with cryptorchid testes are at 23 times greater risk of developing SCT and those in the abdomen are more likely to be affected, SCT have also been reported in scrotal testis. Sertoli cell tumors (SCT) occur between 2.5-16 years of age. Boxers and weimeanars are at increased risk for SCT. Sertoli cell tumors are mostly found when there are lesions associated with hormonal secretion by the tumor, and when they cause testicular and or scrotal enlargement. This is a report of Sertoli cell tumor in an intact Swiss mountain terrier dog

Material & Method

History

A Swiss mountain terrier male dog aged 7 years was presented to the Clinic of Department of Gynecology and Obstetrics, Veterinary College, Bangalore, with a complaint of rough and dry hair coat and scrotal enlargement. The swelling had started as a small enlargement two months ago, had now increased to a size of a cricket ball when presented for examination. The enlargement had begun to interfere with the movement of

the animal. It had normal appetite and did not exhibit any other symptoms of systemic illness.

Clinical Signs & Diagnosis

On physical examination, the right side scrotum showed enlargement of the size of cricket ball. On palpation thickening of scrotal skin was observed. The mass in the right testis appeared hard and had the feel of the mass floating in the fluid. The left side testis appeared normal in size and consistency on palpation. The dog also exhibited pendulous prepuceal sheath, gynecomastia, rough and dry hair coat.



Enlarged right testis



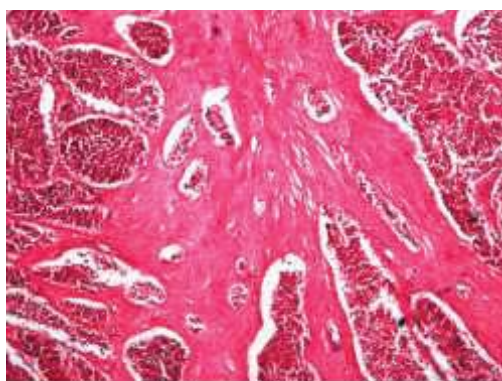
Testicular tumor within fluid filled cavity as testicular tumor producing oestrogen.

Ultrasonic evaluation of the testis was performed. The dog was placed in lateral recumbency. Using B-mode, 7.5 MHz transducer ultrasound evaluation of the scrotum was done. The evaluation revealed a hypochoic mass surrounded by an anechoic region and a hyperechoic capsule whereas the left testis appeared normal.

Cytology of the prepuceal mucosa was also studied. Keratinization of scrotal mucosa was observed suggesting oestrogenic influence. Based on palpation, ultrasound evaluation of the scrotum and prepuceal mucosal cytology it was tentatively diagnosed

Treatment

The treatment of choice for testicular tumors is orchiectomy. Because of relatively high incidence of bilateral neoplasia and atrophy of the unaffected testis, it was decided to do bilateral orchiectomy. The dog was pre-medicated with atropine sulphate @ 0.045 mg/kg body weight sedated with inj. Xylazine @ 1mg/kg body weight (intramuscular). Anaesthesia was induced and maintained by ketamine and propofol combination (1:1) intravenously.



Histopathology - Sertoli cell tumor

Bilateral orchietomy was performed according to the standard surgical procedures. Post operatively, the dog was stabilized with intravenous fluids (RL), antibiotics. Post operative care included antibiotics for 7 days and surgical wound dressing. The dog responded well for the treatment and was clinically healthy during the eight week follow up period.

As the animal was presented for follow up on regular basis, it was observed that the feminizing signs of gynecomastia, pendulous prepuce and rough hair coat began to slowly resolve and the animal appeared normal in six weeks time.

Macroscopically the affected right side mass appeared solid, nodular, white in colour and approximately 6 cms in diameter. The left testis although was normal in size had begun to show nodular appearance. The Tumor mass of both the testis were subjected to histopathological evaluation. Histopathology revealed a tumor composed of elongated cells with hyperchromatic nucleus and scant to moderate amount of cytoplasm, suggestive of sertoli cell tumor.

Discussion

Sertoli cell tumors are the neoplasms of the nurse cells of the testis. They are common type of testicular neoplasia in retained testis but this is a case report of sertoli cell tumor in the scrotal testis which is reported to be as high as 52 percent (Nieto et al., 1989). In this case sertoli cell tumor of the right side was evident because of its size whereas, with the left testis it was not palpable and even ultrasonography could not reveal the presence of SCT. SCT in the left testis was confirmed by histopathological evaluation. It is reported that Small SCT in scrotal testis may not be palpable

within the testicular paranchyma. (England, 1995).

The exhibition of feminization like gynecomastia and pendulous prepuce is related to hormone production by Sertoli cell tumours. Dreimanis et al.(2012) evaluated preputial cytology as an indicator of estrogen secreting testicular tumors and found that 10 of 45 dogs had an serum estrogen concentration of greater than 40 pmol/L. So it is clear that some Sertoli cell tumours are responsible for estrogen production and feminization.

In this case the feminization symptoms were of mild nature as it is suggested that secondary effects are related to size of neoplasms and as such, tumours in cryptorchid testes are likely to achieve a large size, and are more likely to be associated with secondary effects, as this was SCT of scrotal testis, the size was not large enough to produce severe feminization

The treatment of choice for testicular tumors is orchietomy because of the relatively high incidence of bilateral neoplasia, and atropy of unaffected testis, bilateral orchietomy is recommended

References

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