OLGU SUNUMU

CASE REPORT

A metastatic seminoma in a dog ▶

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S U M M A R Y

A 12 year-old, male, mixed breed dog was referred to our clinic suffering from enlarged testicle. The testicle had became extensively larger within last 6 months. The dog was emaciated and showed a small ulcerated lesion on the right scrotum. The testicular area was quite sensitive to touch especially in milieu of enlarged testicle. Abdominal and thoracal radiography was taken. Because of the nature of the enlarged testicle it was decided to perform bilateral orchiectomy (included sound testicle). A cauliflower like growth was observed within preputium adhered to the midway of the shaft of the penis. Therefore partial amputation of penis including the growth was also achieved. To observe whether the tumor metastazed to the nearest lymp node, right superficial inguinal lymhp node was removed for histopathological examination. The mass was 14X9 cm in size and weighed 550 g. The case was determined to be a metastatic seminoma in histopathological evaluation. X-ray images showed that the tumor metastazed to the lungs. Two weeks postoperatively Cisplatin chemotheraphy protocol was initiated at a dosage of 60 mg/m² (diluted in 370 ml of saline) intravenously. After 1 month the dog was brighter. Apetite and activity level of the dog increased. No surgical complication or medication was observed at the final control (at the 18th month of postsurgery).

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Bir köpekte metastazik seminoma

Ö Z E T

Oniki yaşında erkek, melez bir köpek testislerinde büyümeye bağlı ağrıdan dolayı kliniğimize getirildi. Testisin son 6 ayda aşırı büyüdüğü bildirildi. Köpeğin aşırı zayıflamış ve sağ skrotum üzerinde küçük ülseratif lezyonların bulunduğu gözlendi. Testiste büyümenin olduğu bölge dokunmaya oldukça duyarlıydı. Abdominal ve torakal radyografi çekildi. Testisin yapı olarak çok büyüdüğünden bilateral orşiektomi'ye (sağlam testisle birlikte) karar verildi. Penisin ortasına kadar uzanan prepusyuma yapışmış karnıbahar benzeri üremeler görüldü. Bu yüzden büyümeleride içermek kaydıyla penis kısmi penis amputasyonu yapıldı. En yakın lenf nodulüne metastaz yapıp yapmadığını görmek için sağ *ln inguinalis superficialis dextra* histopatolojik inceleme amacıyla uzaklaştırıldı. Kitle 14x9 cm boyutunda ve 550 g ağırlığındaydı. Histopatolojik muayenede olgunun mestastazik seminoma olduğu tespit edildi. Radyografik görüntü tümörün akciğerlere metastaz yaptığını gösterdi. 60 mg/m² (370 ml serum fizyolojikte dilüe edilerek) dozunda intravenöz yolla Cisplatin kemoterapi protokolü başlatıldı. Bir ay sonraki kontrolde köpek daha canlıydı. İştah ve aktivite artmıştı. Son kontrolde (postoperatif 18. ay) herhangi bir cerrahi ve ilaçla sağaltımıyla ilgili komplikasyon gözlenmedi.

INTRODUCTION

Testicular tumors and Leydig cell hyperplasia are common findings in aged dogs unlike in ohter domestic animals.[1] The prevalance varies from 0,07 to 4,60 % in male dogs[2, 3] and especially in older dogs the prevalance can be as high as 60 %.[4] In men, however, testicular tumors occur most often in adults older than 40 years of age[5]. The three main types of testicular neoplasms in dogs are Sertoli cell tumors, seminomas and Leydig cell tumors, and these tumors occur at about equal frequencies.[6] In dogs, Sertoli cell tumors, seminomas and interstitial cell tumors account for most of the testicular neoplasms.[7,8] Ohter canine testicular tumors such as gonadoblastomas, schwannomas and leiomyomas are rarely reported.[9-11] Sertoli cell tumors, seminomas and Leydig cell tumors are seldom lethal and can cause feminization of the dog, which in severe cases can lead to a fatal bone narrow depression. Feminization is caused by hyperestrogenism and is mostly associated with Sertoli cell tumors but Leydig cell tumors and seminomas have also been associated with this syndrome. When feminization occurs in dogs with a seminoma, it is presumed that a co-existing Sertoli or Leydig cell tumor is responsible for the hyperestrogenism.[6]

Cryptorchidism is an important risk factor for the development of testicular tumors, causing a 26-fold increase in the risk for Sertoli cell tumors and a 15-fold increase for seminomas.[12] Although Sertoli cell tumors and seminomas are considered to be potentially malignant, they seldom metastasis in the dog, whereas seminomas in men are highly malignant.[13] Both Sertoli cell tumors and Leydig cell tumors can cause increased estrogen production leading to signs of feminazation and alopecia, but seminomas were not endocrinologically active.[1]

In dogs, seminomas arising from the retained abdominal or inguinal testicles, without scrotal involvement, are usually benign, although a malignant one with extensive metastasis has been reported. Seminoma arising from extragonadal germ cells has not been identified in dogs.[14]

The seminoma of the testis develops from germ cells before somatic differentiation.[15] They arise from cells of the spermatogenic series, presumably from basal spermatogonia.[16]

This paper discusses the surgical intervention, histopathology and postoperative chemotherapy of a metastased seminoma in a dog.

CASE HISTORY

A 12 years old, male dog was referred to the Department of Surgery, Afyon Kocatepe University Faculty of Veterinary Medicine due to testicular enlargement. According to the owner, anorexia and increased live body weight loss of 5 kg over the last month was noted. The dog's testicle became larger than the normal size within the last 6 months. Dog was realuctant to do exercise even owner's commands.

On physical examination, the dog was emaciated and showed a small ulcerated lesion on the scrotal skin in addition to an enlarged right testicle (Figure 1). Respiration, heart rate, urination and reflexes were in normal range. However the testicular area was quite sensitive to touch especially in the milieu of enlarged testicle.

Because of the nature of the enlarged testicle we decided to carry out bilateral orchidectomy (including sound testicle). Following 12 hour fasting animal was premedicated with 0.045 mg/kg of atropine sulphate and sedated with intramuscular administration of xylazine HCl (Rompun %2, Bayer, İstanbul) at a dose of 2 mg/kg. Following the sedation, 10 mg/kg Ketamine HCl was intravenously given. Fluid administration (Lactated Ringer's solution) was provided before, during and after the surgery. To this end, an aseptic surgery was performed. A circular skin incision was made at the base of the scrotum. *Canalis inguinalis* was carefully exposed. Double clamps was applied to the *ductus deferences* and the *plexus panpiniformes*. The testicles were transected between the clamps. A cauliflower-like growth was also observed within the *preputium* adhered to the midway of the shaft of the penis. Therefore partial amputation of penis including the growth was achieved accordingly.

To observe whether the tumor metastazed to the nearest lymp node, the right superficial inguinal lymhp node was removed for histopathological examination. Tissues (testicle and lymph node) were fixed in 10% formalin solution and embedded in parafin. Five micron sections were stained with hematoxyline and eosin (H&E) and examined under a light microsope. An Elizabethian collar was placed on the neck of the dog for 10 days during the wound healing. Metronidazole 15 mg/kg live body weight, per os, twice a day for 10 days and cephalexin, 30 mg/kg live body weight for