

A Survey on Cases of Canine Transmissible Venereal Tumor (TVT) in Kintamani Dog

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ABSTRACT

The cases of canine transmissible venereal tumor (TVT) in Kintamani dog were studied by evaluating the cases in clinical records from some veterinary clinics in the two regencies of Badung, Gianyar and Denpasar City. A total of 486 clinical records on Kintamani dogs gathered from 2010 to 2014 was used in this study. Among those, the specific cases on TVT diagnostic were observed. The study showed that the prevalence of TVT was categorized low. Three of Kintamani dogs were diagnosed to have TVT (0.62%). Canine transmissible venereal tumor affected both male and female dogs. The tumor cases were recorded in varied ages, from 2 to 5 years. This result indicates that TVT in Kintamani dogs is likely to be associated with the dog's sexual maturity.

Key words : prevalence, venereal tumor, Kintamani dogs

INTRODUCTION

Health problems in dogs have long been concerned for those who are interested in canine health and welfare. Certain canine breeds are reportedly predisposed to particular problems associated with genetic transmission of deleterious traits, including a range of conformational and non-conformational disorders (Collin *et al.*, 2010; Asher *et al.*, 2009). The information on the related canine health problems that are commonly affecting dogs in certain breeds is very important to be concerned.

Transmissible Venereal Tumor (TVT), also called infectious sarcoma, venereal granuloma, transmissible lymphosarcoma or Sticker tumor is a benign reticulo-endothelial tumor of the dog's external genitalia (Purohit, 2008). It is normally transmitted during coitus (Tella *et al.*, 2004) by viable tumor cells through injured mucosa (Da Silva *et al.*, 2014; Birhan and Chanie, 2015). Canine transmissible venereal tumor (TVT) is a common tumor in dogs and affecting either sexes, male and female dogs. The cases are relatively high in sexually matured dogs with incidence ranging from 2 to 43 percent

occurred in areas with temperate climates (Purohit, 2008). Dogs of any breed, age or sex are susceptible, although dogs with aged over than one year are at high risk. However, the most common age occurs in 2 to 5 year old (Das and Kumar, 2000). The TVT occurs primarily in young dogs; strayed and sexually active dogs are the main prevalent. The disease has been a worldwide distributed and the highest incidence occurred in tropical and subtropical regions.

The Kintamani dog, is the Indonesian first breed dog that is recognized by the Asia Kennel Union. The Kintamani Bali Dog is a popular pet in Indonesia. This breed is native form the village of Sukawana in the subdistrict of Kintamani, in Bali. The Kintamani dogs are described as intelligent, hardy and gently dogs (Puja *et al.*, 2005). Although it's physical and personal features have been very well established, it's problem in external reproductive organ, especially Canine Transmissible Venereal Tumor (TVT), is not clearly known. This scientific report describes the prevalence of TVT in Kintamani dogs in some areas in Bali and its related factors that may be associated with the occurrence of the TVT. This report is essential as a baseline

estimate in order to achieve a proper breeding management for the dog.

MATERIALS AND METHODS

The clinical data on Kintamani dog were collected from medical records presented in the in veterinary clinics in Badung Regency, Gianyar Regency, and Denpasar City during 2010 to 2014. Confirmation interview was made to the veterinarian clinics for every case related to TVT. Percentages were calculated and the data were generated using descriptive analysis.

RESULTS AND DISCUSSION

Results

A total of 486 Kintamani Bali dogs were recorded in nine veterinary clinics in Badung Regency, Gianyar Regency, and Denpasar City from 2010 to 2014 with different health statuses (Table 1). The details of the samples were noted as follows: 3 (0.62%) was diagnosed for having venereal tumor, 279 (57.41%) were diagnosed infected with other disorders and 202 (41.57%) were healthy.

Discussion

Based on sample data obtained in this study the Kintamani dogs were pretty much maintained by the community in the study areas. Additionally, the community is more likely to have the male dogs compared to the female. From data observation, the majority of the Kintamani dogs reared sex male (70.9%), while, the females were (29.02%). The higher number of male dogs reared by the community obtained in this study is influenced by the culture of people who think the male dogs are more agile and have good guard properties when compared to the female dogs.

This study found the prevalence of venereal tumors in Kintamani dogs was 0.62%. The prevalence is not high and it is much smaller compared to other prevalence of venereal tumors in other dogs in other countries (Khan *et al.*, 2009).

Table 1. General Data of Kintamani Dogs from 2010 to 2014 in the 9 Veterinary Clinics in Badung Regency, Gianyar Regency, and Denpasar City

General Data of Kintamani Bali Dogs	Total	Percentage (%)
Location		
Badung Regency	107	22.02
Gianyar Regency	32	6.59
Denpasar City	347	71.39
Sex		
Male	345	70.9
Female	141	29.02
Age		
0 – ≤ 3 months	78	16.04
3 – ≤ 6 months	106	21.82
6 – ≤ 9 months	32	6.59
9 – 12 months	72	14.81
> 12 months	198	40.74
Health Status		
Healthy	202	41.57
Other disorders	279	57.41
Venereal Tumor	3	0.62

The relatively low number of TVT in Kintamani Bali dogs is likely due to the intensive maintenance system of the dogs given by the owners. Kintamani dog's community in Bali seems to have more understanding and responsible for the dog health compared to Bali local dog community. Additionally, the owners of the Kintamani dog strict for the dogs not mating with free roaming local dogs. As a result, the case of TVT in Kintamani dogs is low.

Generally, the incidence of venereal tumor is more common in sexually active dogs. The case of disease is categorized high in some races of dogs in tropical and subtropical countries (Das and Das, 2000; Otter *et al.*, 2015). Some cases of venereal tumor are found in some countries of South and Central America, Africa and Asia. Venereal tumor is endemic in at least 90 countries worldwide (Strakova and Murchison, 2014). The global spread cases of venereal tumor shows that most races of dogs, genders, and ages can be infected with this disease (Das and Das, 2000; Das and Kumar, 2000).

When the age of the infected dogs is grouped, the cases of venereal tumor in Kintamani dogs were found in the dogs that

aged between 2, 3 and 5 years. These ages are the same with the incidence of the tumor in other dogs. Some researchers reported that dogs that aged between 2 - 5 years are susceptible for venereal tumor (Das *et al.*, 1991). Canine Transmissible Venereal Tumor (TVT) or commonly known as infectious sarcoma, venereal granuloma, transmissible lymphosarcoma is a tumor that infects the outer genital organs of male and female dogs either (Behera *et al.*, 2012).

CONCLUSION

The prevalence of venereal tumor in Kintamani dogs is relatively a low (0,62%) in the Badung Regency, Gianyar Regency, and Denpasar City in a period of 2010 to 2014. Good maintenance of Kintamani dogs may affect the low prevalence of venereal tumor in the areas.

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