International Journal of Microbiology Research and Reviews ISSN 2329-9800 Vol. 4 (1), pp.127-129, January, 2015. Available online at www.internationalscholarsjournals.org © International Scholars Journals

Case Report

A case report on natural regression of oral papillomatosis in a dog

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Accepted 04 March, 2013

Canine oral papillomatosis is one of the viral diseases of dogs rarely seen in canine populations. The disease is contagious only in young dogs, immune suppressed adults, those under corticosteroid therapy or with debilitating diseases. Young dogs often develop oral papillomatosis due to absence of protective immunity against the papilloma virus and with time extrude the virus following adequate antibody response. Most dog owners often opt for surgical removal of papilloma growth apparently on aesthetic reasons which sometimes maybe detrimental especially to geriatric dogs. Though there are medications available for the treatment of papillomatosis, most canine oral papillomatosis regresses naturally without treatment. However such dogs should be under Veterinary supervision for early intervention in cases of invasion of growths by oncogenic cells.

Key words: Oral, papillomatosis, dogs, natural regression, immunosuppression.

INTRODUCTION

Canine papillomatosis otherwise known as infectious warts is a contagious benign tumour caused by papilloma virus (Biricik, *et al*., 2008). Canine papillomatosis have different variants each showing varying clinical manifestations. The variants range from Canine oral papillomatosis; Canine exophytic papillomatosis; cutaneous papillomatosis; Cutaneous inverted papillomatosis; Pigmented epidermal plaques to Squamous cell carcinoma all capable of infecting dogs (Campbell, 2004).

Canine oral papillomatosis is characterised by a wart-like tuft of cauliflower-like tissues which when pigmented assumes a black colour (DeBey, *et al*., 2001). There may be some genetic disposition towards development of papillomatosis in dogs but the disease is often seen in immune suppressed young dogs although there have been cases in adult dogs (DeBey, *et al*., 2001; Ezeibe, unpublished article).

Virus is transmitted by direct contact, through fomites and perhaps insect bites. The incubation period is 1-2 months. Lesions in dogs are common around the lips, mouth and tongue (Biricik, *et al*., 2008; Yaqci, et al., 2008). In some cases lesions become extensive and may require surgical intervention (Bredal, *et al.,* 1996; Fenner, *et al.,* 1993). Otherwise most cases of papillomatosis resolve naturally.

Rarely there may be invasion of cancerous cells into papillomas resulting to intractable condition.

The natural regression of the warts on its own is diagnostic of papillomatosis, however tissue biopsy and serology are done for confirmation. In the advent of chemotherapy on Canine papillomatosis (Biricik, *et al.,* 2008; Yaqci, *et al*., 2008), it therefore becomes imperative to review the importance of surgical intervention on papillomatosis considering its possible adverse effects especially in old dogs.

A Case Report

Four indigenous breed of dogs between the ages of 4-5 months weighing between 5-6kg were purchased from the local market at Nsukka and housed in a well fumigated and cleaned kennel for the purposes of research. Weeks' later one of the dogs developed some growth at the corners of the mouth which later increased in size and area as the week progressed. A month later the cauliflower-like growth expanded, pinkish in colour and became pendulous at both sides of the mouth (Figure 1). Initially the growth was inconspicuous until the dog opens its mouth but with time it became conspicuous (Figure 2) even when the mouth was closed. However, the growths did not affect the appetite of the dog.

Figure 1. Lateral view of a dog with papillomatosis.

Figure 2. Frontal view of a dog with cauliflower- like papillomatosis at the corners of the mouth.

Figure 3. Natural regression of papillomatosis in a dog .

Clinical investigation revealed temperature of 38.9^{oC};pulse rate 100beats/min; character of pulse was strongand regular; heart rate 100 beats/min, character was strong and regular; respiratory rate was 16 cycles/min and rhythm was regular; mucous membrane was normal; body condition was ideal. Two months later the growth gradually regress and by the third month there was only a few stumps left at the site of growth. Although the infected dog was not isolated, there was no evidence of transmission of infection to other in-mates months later. A definitive diagnosis of papillomatosis was made by the natural regression (Figure 3) of the growths even without treatment which was a major characteristic of cutaneous papilloma virus in dogs.

DISCUSSION

Immunity is an important factor that determines development of papillomatosis in dogs. Mostly disease is seen in young dogs which are yet to develop effective antibodies able to prevent the establishment and development of the virus (Marvista, 2004). Most dogs with regressed papilloma had neutralizing antibodies titre of <1:10 to 1:500 (Velma, *et al.,* 1960). Adult dogs rarely develop papillomatosis due to their matured immunity built over time. Sometimes disease is seen in adult dogs that are immunodeficient or have been under corticosteroid therapy or oral cyclosporine for the treatment of immune-mediated disease (Marvista, 2004) Corticosteroid been a steroid suppresses the immune system preventing the synthesis of protective antibodies in such dog. In this case report, the dog had papillomatosis long enough to develop sufficient antibodies which later suppressed the viral growth. The antibodies were high enough to cause complete regression '-=-of the viral growth as observed by (velma, *et al*., 1960). Nevertheless there are documented cases of recur. Such cases could be treated with taurolidine a broad spectrum anti microbial at 45mg/kg in Ringers solution iv at 3 days interval. Often there is a complete resolution of the growth by the 5th application (Biricikal, *et al.,* 2008) or the administration of Azithromycin at the dose of 10mg/kgdaily per os for 10-15 days without recur (Yaqui, et al., 2008; Marvista, 2004). More recently, Imidioquin a topical medication was developed and used extensively in both humans and canine papillomatosis (Marvista, 2012). Vincristine an antiviral agent have been successfully used to treat cutaneous oral papillotomasis in three adult dogs at the dose of 0.05mg/kg for 2 weeks without recur (Ezeibe, 2012 unpublished data). There have also been recorded cases of vaccination of dogs with adjuvant canine oral papilloma virus which prevented development of field challenge (Velma, *et al*., 1960; Ezeibe, 2012 unpublished article).

Request (Figure 2)for surgical intervention basically on aesthetic reasons is discouraged because of possible complications that may arise from administration of anaesthesia especially in old dogs with poor liver and kidney functions. Dogs treated with afore-mentioned medications should be routinely examined for recur and unanticipated complications. It should be borne in mind that surgical removal of warts does not guarantee treatment because the virus is still in the system and will definitely regroup. So the emphasis should be to boost the immunity of the dog to completely eliminate the virus. Recently there has been an assumption that over vaccination of dogs induces development of papillomatosis (Becker, 2012). Hence there should be strict adherence to vaccination protocol recommended by the Vaccine guideline group (VGG) of World Veterinary American Small Animal Association.

Contrary to the reports of Yaqci, *et al*., (2008) the infected dog in this case had voracious appetite probably because the growth did not affect the oesophagus or obstruct respiration or phagia.

The failure of the in-mates to develop papillomatosis despite its contagious nature could largely depend on their robust immune status. Thus, suppresses the establishment and further development of the virus in the dogs (Velma*, et al*., 1960; Marvista, 2004).

In conclusion, Canine papillomatosis although is contagious but not life threatening as the growth regresses naturally (figure 3), however, infected dogs should be closely monitored to prevent complications. Surgical procedures should be considered as the last option especially in the advent of chemotherapeutic interventions.

REFERENCES

Becker K (2013).The Secret to a Wart-Free Dog. Presented by Mecopola.com, take control of your health since 1977. MarVista2004. Canineviralpapillomatosis.

AnimalMedicalCenter3850GrandViewBlvd. LosAngeles,CA 90066(310)391-6741Fax:(310)391-6744.391-6744.

Biricik HS,Cabalar MM, Gulbahar MY (2008). Oral Papillomatosis in a Dog and its Therapy with Taurolidine, Acta Vet. Brno, 77: 373–375.

Bredal WP, Thoresen SI, Rimstad E, Aleksandersen M, Nafstad PH (1996). Diagnosis and clinical course of canine oral papillomavirus infection. J. Small Anim Pract 37: 138-142.

Campbell KL (2004). Small Animal Dermatology Secrets. Hanley & Belfus, Philadelphia. pp 184-5.

DeBey BM, Baglidi-Swanson M, Kapil S, Frederick W Oehme ((2001). Digital papillomatosis in a confined Beagle. J Vet Diagn Invest 13:346-348.

Fenner F, Gibbs EP J, Murphy FA, Rott R, Studdert MJ, White D.O (1993). VeterinaryVirology. 2nd ed. Academic press, london, 666.

Velma CC, Charles AE, Russell SW (1960). Canine Oral Papillomatosis II. Immunologic Aspects of the Disease. J.

Canc. Res, 1916-1930; Am. J. Canc, 1932-1940.
Yağci BB, Ural K, Ocal N, Haydardedeoğlu AE (2008). Azithromycin therapy of papillomatosis in dogs: a prospective, randomized, double-blinded, placebo-controlled clinical trial. 19 (4):194-8.