Journal of Entomology and Zoology Studies

Available online at www.entomoljournal.com

E-ISSN: 2320-7078
P-ISSN: 2349-6800
JEZS 2019; 7(4): 151-152

Received: 04-05-2019
Accepted: 06-06-2019

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Efficacy of auto: Hemotherapy in canine oral papillomatosis: A case report

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Abstract
A two year old male local dog was presented with signs of cauliflower like growth (warts) on multiple locations including peri-ocular region of the left eye, and the oral cavity. Based upon the clinical examination, it was diagnosed as a case of canine papillomatosis. Auto-hemotherapy treatment proved effective in treating the condition. Complete regression of the warts was observed on the 14th day of treatment.

Keywords: Dog, canine papillomatosis, Auto-hemotherapy

Introduction
Canine Papilloma Virus (CPV), a double stranded non envelope DNA virus of the Papovaviridae family causes Canine Papillomatosis and has a strong tropism for cutaneous squamous or mucosal epithelium (Gross *et al*, 2005) [9]. CPV are a cluster of 8 viruses designated CPV1 through to CPV8 affecting dogs worldwide (Lange and Favrot, 2011) [10]. Observation of warts in dogs (Delius *et al*., 1994) [6] and the occurrence of the warts on penis, vulva, skin and conjunctival membranes (Sanson et *al*., 1996) [13] has been reported. Single or multiple cauliflowers like lesions appears with average size of 1.0 cm in diameter and are mostly located in the mucous membranes and the muco-cutaneous junction.
Auto-hemotherapy (AHT), a widely used therapeutic technique in veterinary practice that treats several pathological conditions with satisfactory clinical results (Borges *et al*, 2014) [2]. The procedure consists of collecting a whole blood sample from the sick animal which is administered immediately through intra-muscular route, sub-cutaneous, intra-venous or intra-dermal (Mettenleiter, 1936) [11].

Case History and Diagnosis
A two-year-old male local dog was presented in the Veterinary Hospital, College of Veterinary Sciences, CAU, Peren District with the complain of presence of wart like growth in the facial region. Appearances of multiple warts were noticed a month back with increment in size and number. On clinical examination, cauliflower- like growth/ warts around the peri-ocular region of the left eye and the oral cavity were observed (Fig 1: A & B). Based upon the clinical examination, it was diagnosed as a case of canine papillomatosis.

Fig 1 A & B: Macroscopic appearance of oral papillomatosis before autohemotherapy.

Treatment and Discussion

The present case was decided to undertake auto-hemotherapy. Accordingly, the animal was injected with 5ml of its own venous blood deep intramuscularly drawn from the cephalic vein by using 22G hypodermic needle in a disposable syringe by taking into consideration all sterile precautions. The animal was kept under observation for a week. Following treatment, there was a marked visible improvement with regression in the warts size. Complete regression of the warts was observed on the 14th day. (Fig 2: C & D) and no further treatment was required.

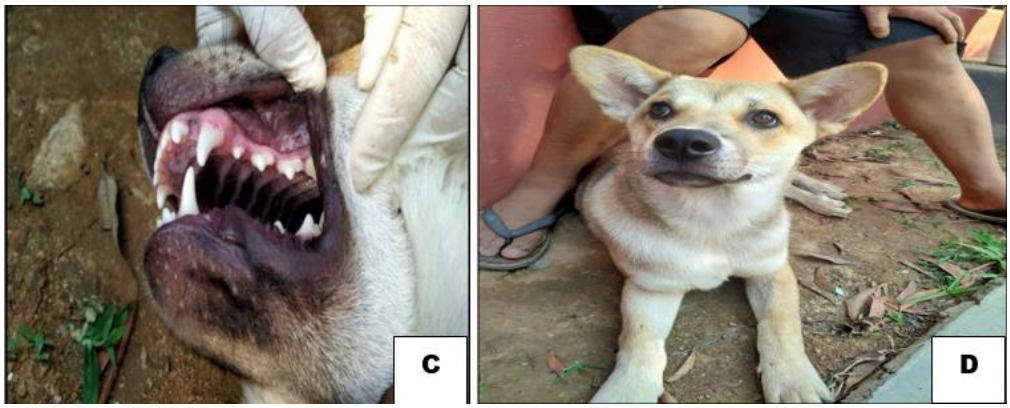

Fig 2 C & D: Absence of oral papillomas after 14th day of autohemotherapy

Canine papillomatosis is self-limiting and regression of the verrucous processes takes place 4 to 8 weeks post onset but in few cases may remain and multiply (Calvert, 2003). The papilloma characteristics observed in this case is similar with the symptoms described in the literature for oral papillomatosis (Fantini *et al*. 2015; Bambo *et al.* 2012; Cesarino *et al*. 2008; Borges *et al*. 2017) [7, 1, 5, 3]. In this case non–regression of the warts was observed, so therapeutic intervention was undertaken.

Auto-hemotherapy (AHT) is a widely used therapeutic technique in veterinary that presents satisfactory clinical results to treat several pathologies (Borges *et al*, 2014) [2]. As per Borges *et al*. 2017 [3], in the routine canine clinical practice, empirical intra-muscular auto-hemotherapy has shown excellent result based mostly on the experience with bovine papillomatosis, as there are very few works and protocols described for the treatment in dogs. The observation in the present case are in accordance with the findings of Borges *et al*. 2017 [3] who reported that auto-hemotherapy applied proved to be effective in treating dogs with moderate oral papillomatosis with no clinical side effects.

Conclusion

Auto-hemotherapy administered @ 5ml intramuscularly proved to be effective to treat the dog with oral papillomatosis leading to complete remission after 14 days. The present report suggests that without any chemical agents, auto-hemotherapy can be effectively employed to treat canine oral papillomatosis although the role of platelets in immune modulation and tissue repair needs further investigation.

Conflict of interest

There is no conflict of interest.

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