



International Journal of Veterinary Sciences and Animal Husbandry



ISSN: 2456-2912

VET 2025; SP-10(1): 68-70

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www.veterinarypaper.com

Received: 12-11-2024

Accepted: 11-12-2024

PA Enbavelan

Assistant Professor, Department
of Veterinary Medicine,
Veterinary College and Research
Institute, Salem, Tamil Nadu,
India

RC Sundrarajan

Assistant Professor,
Department of Veterinary
Medicine, Veterinary College and
Research Institute, Tirunelveli,
Tamil Nadu, India

E Venkatesakumar

Professor and Head, Department
of Veterinary Medicine,
Veterinary College and Research
Institute, Salem, Tamil Nadu,
India

S Sunandhadevi

Assistant Professor, Department
of Veterinary Medicine,
Veterinary College and Research
Institute, Salem, Tamil Nadu,
India

R Ramprabhu

Professor, Department of
Veterinary Clinical Medicine,
Madras Veterinary College,
Chennai, Tamil Nadu, India

Corresponding Author:

PA Enbavelan

Assistant Professor, Department
of Veterinary Medicine,
Veterinary College and Research
Institute, Salem, Tamil Nadu,
India

Successful therapeutic management of canine papillomatosis in dogs

PA Enbavelan, RC Sundrarajan, E Venkatesakumar, S Sunandhadevi
and R Ramprabhu

DOI: <https://dx.doi.org/10.22271/veterinary.2025.v10.i1Sb.2023>

Abstract

Five dogs exhibited multiple cauliflower-like growths on the skin, primarily located on the face, ventral mandible, areas around the oral cavity, as well as on the legs and ventral abdomen. Similar growths were also observed on the dorsal and ventral surfaces of the tongue. These growths were grayish-white in appearance and were clinically diagnosed as canine papillomatosis. Initial treatments, including thuja 30cc (a homeopathic remedy), autoimmune therapy using serum, and topical applications such as Podowart and apple cider vinegar, were found to be ineffective. However, subsequent treatment with lithium antimony thiomalate successfully resolved the condition.

Keywords: Cauliflower, canine papillomatosis, lithium antimony thiomalate, thuja 300cc

Introduction

Papilloma viruses are known to cause warts in dogs with these warts commonly appearing on the penis, vulva, skin, and conjunctival membranes (Sansom *et al.*, 1996) ^[10]. Various forms of papilloma associated with papilloma virus infection include cutaneous squamous papilloma (Campbell *et al.*, 1988) ^[2], cutaneous inverted papilloma (Shimada *et al.*, 1993) ^[12], and canine pigmented epidermal nevus (Nagata *et al.*, 1995) ^[7]. Although multiple canine papillomas are relatively rare, their occurrence often suggests the involvement of multiple papilloma virus types. Treatment options for canine papillomatosis include autogenous vaccination for both prevention and treatment (Nicolls and Stanley, 1999) ^[8], spontaneous regression, autoimmune therapy (Ghim *et al.*, 2000) ^[4], surgical removal, cryotherapy, crushing of warts to enhance immune response, and the use of medications such as azithromycin (Yaggci *et al.*, 2008) ^[15], lithium antimony thiomalate (Dileepkumar and Ansari, 2012) ^[3], vincristine sulfate, and thuja (Singh and Bhardwaj, 2014) ^[13]. This report focuses on a refractory case of canine papillomatosis involving multiple mucocutaneous tumors in dogs.

Materials and Methods

Five intact non-descriptive male and chippiparai (a male and female) and all the dogs were age group around 6 months to 2yrs, weighing 10 to 15 kgs were presented with the history of number of small cauliflower like mass noticed for past 2 weeks. The owner also reported that the dogs were not dewormed and vaccinated regularly. Physical examination revealed rectal prolapse and abdominal palpation of two male non-descriptive and a male growth on skin of face, ventral mandible, around oral cavity and also on skin of legs and ventral abdomen. Such growth was also present on dorsal and ventral areas of tongue and same as such growth in all other four dogs. These warts were greyish-white in appearance. As reported, warts started appearing on the body two weeks back with gradual increment in size.

Based upon the clinical examination, it was diagnosed as a case of canine papillomatosis. The dog had marked halitosis with mild discharge from the eyes. Blood was collected in EDTA for haematological examination. Haemoglobin content, total leucocyte count, neutrophils, lymphocytes and monocytes were 9.6 to 15 g%, 12000 to 14600/cm, 56 to 82%, 13 to 16% and 1 to 2%, respectively.

The haematology was indicative of neutrophilia and leukocytosis.

The dog was treated with drops Thuja® 30cc for one week with topical application of Apple cider vinegar. Oral medication included tab. Cefixime @10mg/kg, orally for three days, Stenot® (Natural remedies) (a herbal immunomodulator) orally, supplements like tablets Vitamin C, Vitamin B-complex for a week and liver extract for days orally in recommended doses along with eye drops containing Ofloxacin. Autoimmune therapy was undertaken by injecting intramuscularly with 2 ml of serum from the same bitch and was repeated every three days for a total of two doses. The dog was examined after 7 days of treatment. There was mild improvement reduced in numbers but there was an increase in the size of the some of the warts. Haematology on seventh day revealed that all the parameters were normal except eosinophilia (10 to 17%). The dogs was not dewormed for a considerable period of time and skin infection which could be the possible reason for the increase in the eosinophil count and anaemia.

Results and Discussion

After that the dogs were treatment with inj. lithium antimony thiomalate (Anthiomalin® each ml contains 60 mg of lithium antimony thiomalate) was started with a total dose of 0.5 ml deep intramuscularly and along with daily drops of Thuja 30cc TID and a total of three doses on alternate days were

given with 0.5 ml inj. lithium antimony thiomalate increment on subsequent dosing. The dogs were showed fast recovery and there was complete regression of lesions after three doses of Anthiomalin with drops Thuja 30cc.

The case was successfully resolved following the initiation of a combined therapy involving lithium antimony thiomalate and oral administration of Thuja 30 °C. *Thuja occidentalis*, a medicinal plant, has long been utilized for managing various ailments. In traditional medicine, extracts from its dried twig tips have been used to address conditions such as bronchial catarrh, enuresis, cystitis, psoriasis, uterine carcinomas, amenorrhea, and rheumatism. The therapeutic potential of *T. occidentalis* is attributed to its active compounds, including dextro-pinene, dextro-thujone, thujine, laevo-fenchone, and pinpierin. These compounds have demonstrated the ability to enhance interleukin 1, interleukin 6, and tumor necrosis factor alpha, while locally activating cytokine-producing cells for priming without inducing a systemic increase. Additionally, they promote T-helper cell induction, leading to elevated interleukin 2 production (Kalita *et al.*, 2022)^[5]. Various other methods have also been reported for lesion removal, including cryotherapy, surgical excision, cauterization, application of local anesthesia, autologous or heterologous vaccination, and the use of immunomodulators to stimulate the immune system non-specifically (Sharun *et al.*, 2020; Richman *et al.*, 2017; Kalita *et al.*, 2022)^[11, 9, 5].

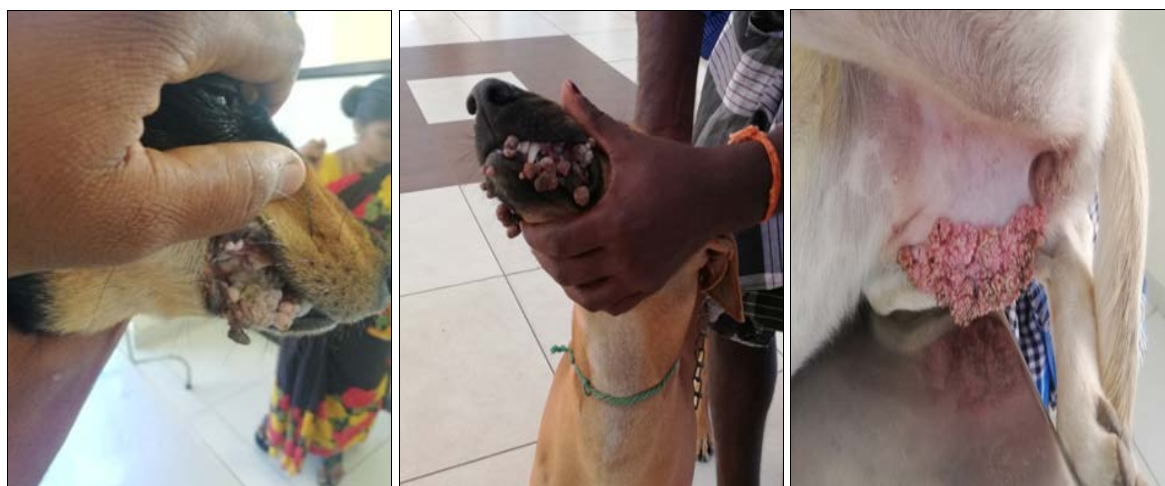


Fig 1: Oral papillomas on the oral cavity and perennial region of a dogs

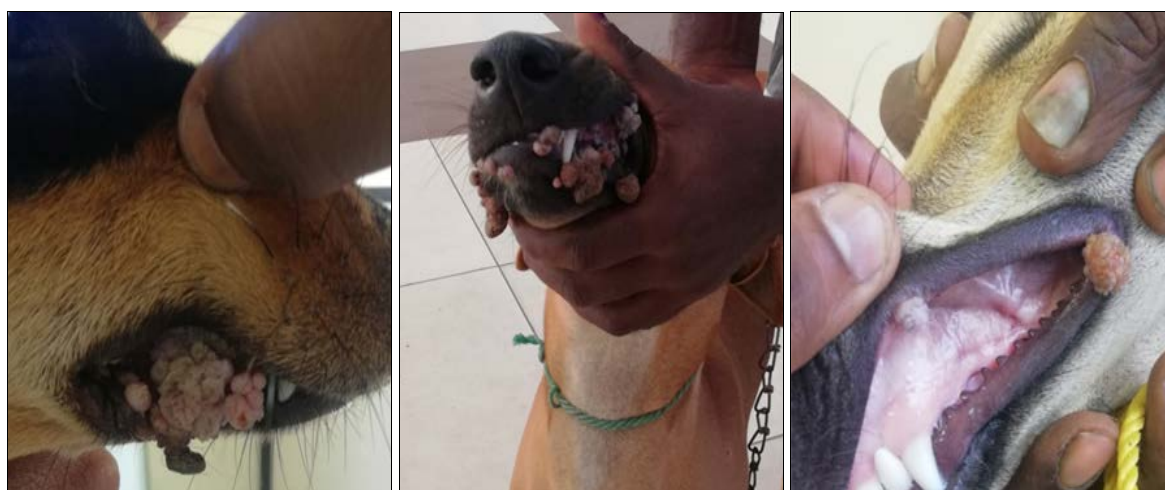


Fig 2: Warts after one week of auto immune therapy reduced numbers and blackish discoloration

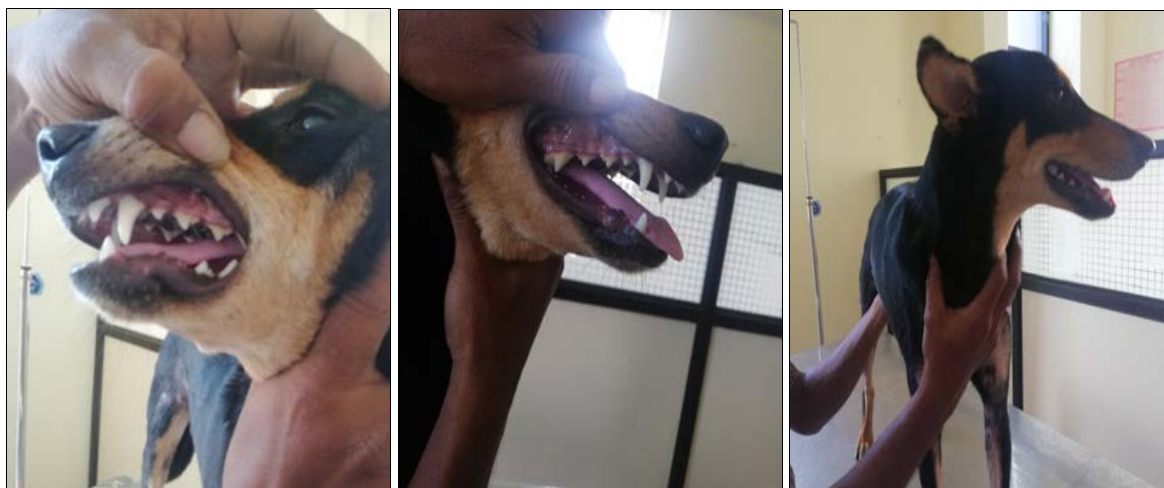


Fig 3: Recovered bitch after anthiomalin and Thuja 30cc treatment

Conclusion

Oral papillomatosis is a common, contagious, and typically self-limiting condition in dogs. However, the cases discussed here were resistant to standard treatment approaches. There is limited literature available on the use of anthiomaline for managing papillomatosis in dogs. Nevertheless, the observations in these cases align with those of Kavithaa *et al.* (2014)^[9], who reported that anthiomaline successfully treated 81% of papilloma cases in Jersey cattle compared to 70% effectiveness with Thuja. These findings suggest that a combination of lithium antimony thiomalate and Thuja 30C drops may yield favorable outcomes in managing such cases.

Conflict of Interest

Not available

Financial Support

Not available

Reference

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How to Cite This Article

Enbavelan PA, Sundrarajan RC, Venkatesakumar E, Sunandhadevi S, Ramprabhu R. Successful therapeutic management of canine papillomatosis in dogs. *International Journal of Veterinary Sciences and Animal Husbandry.* 2025;SP-10(1):68-70.

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