

Management of proliferative thrombovascular necrosis of pinna in a Chippiparai dog

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Abstract

A three-year-old male, Chippiparai dog was presented to the Dermatology unit of Madras Veterinary College Hospital with the complaint of bleeding from right ear tip. History revealed normal appetite, regular deworming and vaccination schedule (recent Anti rabies vaccination). The general clinical examination revealed parameters within the normal range except for the presence of a wedge-shaped ulcerated lesion at the ear tip. Haemogram and serum biochemistry revealed parameters within the normal range. Based on the history of recent vaccination and clinical presentation, the case was diagnosed as proliferative thrombovascular necrosis of the pinna. Treatment was initiated with oral pentoxifylline, doxycycline, niacinamide, vitamin E supplementation and topical tacrolimus application. Uneventful recovery was noticed after one month of treatment.

Keywords: Proliferative Thrombovascular Necrosis, Chippiparai dog, pentoxifylline

Proliferative thrombovascular necrosis of the pinna is a rare condition that affects dogs. Certain breeds, such as Dachshunds and Rhodesian Ridgebacks, appear to be predisposed. Affected pinnae exhibit varying degrees of swelling, crusting, scaling, fissuring, and bleeding. In severe cases, overt progressive necrosis of the pinnae may occur (Innara, 2013).

Three-year-old male Chippiparai dog, was presented to the Dermatology unit of Madras Veterinary College Hospital with complaint of bleeding from the right ear tip. The dog's history revealed a normal appetite, proper deworming, and recent antirabies vaccination, indicating good overall health and care. Upon general clinical examination, all parameters were found to be within the normal range, except for the presence of a wedge-shaped ulcerated lesion at the ear tip. This lesion was the source of the reported bleeding. Haematology

(PCV: 32%, Hemoglobin concentration: 10 g/dL, WBC- 12000 cells / cmm) and serum biochemical analysis (total serum total protein :6.2 g/dL and serum albumin : 2.5 g/dL) revealed no remarkable changes. Skin scraping results were negative for parasites, and the culture of the swab did not reveal any bacterial organisms. Based on the history of recent vaccination and the clinical presentation, the case was diagnosed as proliferative thrombovascular necrosis of pinna. This diagnosis was primarily based on the distinctive lesion observed at the ear tip. Treatment was initiated with pentoxifylline (@15-30mg/kg q8-12hr), vitamin E (@600IUq12hr), topical application of tacrolimus. Doxycycline (@5mg/kgbw q12hr) and niacinamide (@500 mg q8H >10 kg) are administered. The treatment plan proved effective, with an uneventful recovery noticed after one month of treatment.

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Fig. 1. Pinnal Vasculitis-Wedge Shaped Ulcerated Lesion At Ear Tip



Fig. 2. After Recovery

Proliferative thrombovascular necrosis also known as pinnal vasculitis, is a common cause of ischemic pinnal dermatopathy. While the exact etiology is often idiopathic, it may be associated with food allergies or vaccinations (Wilcock and Yager, 1986 ; Miller *et al.*, 2013). Generally, there are no significant systemic signs except for mild malaise. One or both pinnae may appear cyanotic, swollen, and painful. As the disease progresses, the pinnal margins become thickened, necrotic, crusted, and scalloped. If not treated large wedge-shaped areas of pinnal tissue may be lost (Parker and Foster, 1996). Pentoxifylline (@15-30mg/kg q8-12hr), a methylxanthine derivative has both immunomodulatory and rheologic effects, making it a useful therapy for vasculitis. It improves peripheral blood flow and decreases inflammation by reducing platelet aggregation, leukocyte response to IL-1 and TNF- α , and production of TNF- α , IL-1, IL-4, and IL-12. Clinical response to pentoxifylline may take 1-3 months, and it is often used as initial therapy for less severe cases due to its relative lack of side effects. Niacinamide along with doxycycline possesses various anti-inflammatory and immunomodulating properties. Doxycycline (@

5mg/kg q 12hr) and Niacinamide (250 mg q8H for Bwt <10 kg) 500 mg q8H for Bwt >10 kg) (Nichols *et al.*, 2001). Essential fatty acids and vitamin E (400–800 IU dose) have anti-inflammatory and antioxidant qualities. Tacrolimus ointment (0.1%) can be applied twice weekly to maintain remission without the need for systemic therapy.

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