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Polyneuritis in two ducklings: Case report

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Abstract

Two ducklings were presented with the history of stiff, twisted neck and flexed legs. Clinically it was diagnosed as polyneuritis and treated with parenteral thiamine injection. Response to the therapy was suggestive of polyneuritis in the said cases.

Keywords: Polyneuritis, two ducklings: Case report

Introduction

Polyneuritis is a neuromuscular disorder seen in birds due to deficiency of thiamine. The deficiency is of dietary origin or it results from feed containing thiaminase in the diet. It is characterised by lethargy, head tremor followed by sitting on flexed leg and drawing back of head giving a typical star grazing appearance. (the merck veterinary manual, 2016) ^[1].

Case history and Diagnosis

Two ducklings of around 45 days old were presented to the Outpatient Department of TVCC with the complaint of stiff and twisted neck. ^[Fig.1] As reported by the owner the duckling was anorexic for last three days. On presentation, the neck was stiff with anticlockwise bending drawing the head against back and pointing obliquely upward giving a typical stargazing appearance. Needle pricking on the neck and leg region revealed existence of a very minute sensation. The duckling was unable to retract its neck straight and head down for feeding. It was unable to walk properly due to bending of the joint. Based on the clinical history and examination, the case was tentatively diagnosed as polyneuritis.



Fig 1: Before treatment

Treatment

The case was treated with intramuscular injection of thiamine (Beriwins, Carevet Pharma) @ 0.2 ml im on the wing muscle on alternate days for 5 occasions. On third day of post treatment, improvement was recorded with reduction in stiffness and on 8th day post treatment complete recovery was observed with revival from all the symptoms ^[Fig.2]. The response to the thiamine therapy, in the present case, is suggestive of polyneuritis.



Fig 2: After treatment

Discussion

Polyneuritis commonly occurs in birds reared in backward condition due to dietary deficiency of thiamine. It also occurs in mature birds more than 3 weeks of age due to feeding of poorly processed fish meal that contains high levels of thiaminase ^[1]. Thiamin is a cofactor for several enzymes catalyzing decarboxylation and transketolation-type reactions. Thiamine is required for uptake and utilisation of lactic acid produced during carbohydrate metabolism. In its deficiency, the excess build-up level of lactic acid accumulated in the muscle and brain may cause damage to the nervous tissue leading to development of stargazing appearance ^[2].

Reference

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