International Poultry Production

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Tuberculosis

Introduction

Avian tuberculosis, which is also known as avian mycobacteriosis, is a chronic infection of chickens, turkeys or, less commonly, ducks. It is characterised by unthriftiness, decreased egg production and ultimately death. This disease is caused by Mycobacterium avium and can be an issue in free range or village chicken; it is not a disease of modern intensive units. It tends to be a disease of older birds.

Aetiology

Tubercle bacilli (M. avium) are excreted from lesions in the intestines and can be joined in the faeces by bacteria from infected livers. Infection can also occur from a contaminated environment (M. avium can survive in the soil for four or more years). Wild birds might be implicated in the spread of avian tuberculosis.

Clinical signs

No signs are unique for this disease, but include depression, easy tiring, obvious weight loss with breast muscle wasting, ruffled feathers and pale wattles and comb. Sometimes a unilateral lameness is seen. Nodular tuberculosis lesions form in the abdomen and these can be easily palpated in wasted birds. Lesions in the intestines cause diarrhoea. Deaths normally occur in months, but some birds stay alive for a long time.

Pathology

Lesions are commonly seen in the intestines, liver, spleen and bone marrow and less frequently in the heart, ovaries, testes, and skin. In ducks and turkeys lesions predominate in the liver. The lesions of tuberculosis are multiple granulomas containing the acid fast M. avium which can be identified in smears or tissue sections by special stains. Differential diagnosis needs to consider coligranulomas, pullorum disease, staphylococcal infections, fowl cholera, aspergillosis and tumours such as Marek's disease and leucosis.

Treatment

Treatment with anti-tuberculosis drugs is impractical, expensive and rarely considered for poultry.