

LETTER TO THE EDITOR

AIR SAC MITES IN CHICKENS AND DUCKS

SIR: We would like to report the finding of air sac mites, believed to be *Cytodites nudus*, from broilers and ducks in Kelantan.

The broilers were from a shed of 2000 birds on a large broiler farm. They were kept on deep litter with wood-shavings as litter material. The birds were 45 days old and generally underweight, which was attributed to poor management and low quality feed from a small local feedmill. Eight out of 25 birds, that had died overnight, were examined at our laboratory. They were in poor body condition and the cause of death was fibrinous pericarditis and air sacculitis. The pericardium, air sacs and visceral peritoneum were covered with numerous grey-yellow or grey-brown spots of 1-2 mm diameter. After removal of some fibrinous material by needle preparation the typical structure of "naked" mites was seen at 100 times magnification under the microscope. Details of the morphology of these mites were difficult to discern, but the size of approximately 0.5 mm, lack of setae and the shape of body and legs suggest that these parasites were *Cytodites nudus*. These birds had a moderate to severe mite infestation of the air sacs and visceral peritoneum which could have predisposed them to the development of the lesions seen.

In another case, two young ducks, aged approximately eight weeks, had died from malnutrition and exposure. A few air sac mites were noticed in the pericardium and thoracic air sacs. There were no inflammatory changes observed.

Our findings in these two cases seem to be in agreement with the standard textbooks (Loomis, 1978; Hilbrich, 1978) which state that light infestations may be harmless, whereas heavy infestations may be responsible for respiratory symptoms.

The epidemiology of air sac mite infestations is unknown and the history of our cases does not seem to contribute to a better understanding of it. The broilers were on deep litter with wood-shavings from local timber and feral birds had easy access to their feed. The ducks were on sandy soil and there was also ample contact with wild birds. Recently Lohr (unpublished) found eggs and various developmental stages of air sac mites in faecal samples of canaries known to suffer from air sac mite infestation. This might suggest an air-borne route of transmission. Ornamental birds with air sac mites are treated by insecticide inhalation. A similar procedure under the conditions of a commercial broiler farm would appear very risky and labour-intensive. In our case the broilers were left untreated and sold shortly afterwards.

Air sac mites are known to occur in many parts of the world, although they are not a common finding. The occurrence of air sac mites in Malaysia was not mentioned in the poultry disease report by Opitz (1978) nor in the check-list of diseases, parasites and pathogenic organisms of domestic animals in Malaysia (Anon, 1986). Since air sac mites are easily overlooked during routine post-mortem, we feel that poultry diagnosticians should be made aware of these parasites in Malaysia and of their potential role in the development of air sacculitis.

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