

### PASTEURELLA HAEMOLYTICA TYPE T INFECTION IN LAYER CHICKS

SIR: *Pasteurella haemolytica* type T has been associated with septicaemic infection in lambs leading to high mortality (Gilmour *et al.*, 1991). The organism has occasionally been isolated from sheep and goats that died of pneumonic pasteurellosis (Gilmour, 1993). Pasteurellosis in poultry is usually associated with infection by *P. multocida* leading to septicaemia and high mortality rate (Waltman and Horne, 1993). Infection by *P. haemolytica* in poultry, however, is rare. We would like to report a case of *P. haemolytica* type T infection in layer chicks.

Ten layer chicks from a farm in Bidor, Perak, approximately 6 days old, were submitted to the Petaling Jaya Regional Veterinary Laboratory (MVKPJ). The farm had a total layer population of 400,000 birds. The morbidity rate was 0.3% while the mortality rate among the infected chicks was 100%. Infected birds showed nervous syndrome, which include star gazing, torticollis and semi-paralysis. The eyes were swollen while a whitish faeces was noted. The chicks had been vaccinated against Newcastle disease (spray vaccine) on the first day and against infectious bronchitis disease (spray vaccine) on the third day. The initial differential diagnoses include Newcastle disease and avian encephalitis.

Post-mortem examinations of the 10 chicks revealed moderate congestion of the carcass with distended caecum filled with whitish contents. Histopathological examinations showed necrotic areas in the grey matter of the brain. No virus was isolated including Newcastle and avian encephalitis viruses. However, bacteriological examinations revealed pure-culture isolations of *P. haemolytica* type T from the livers and heart swabs.

Pasteurellosis in chickens, also known as fowl cholera, has always been associated with infection by *P. multocida* serotypes A:1, A:3 and A:1,3. Following colonisation of the upper respiratory tract by the pathogenic *P. multocida* strains (Rhoades and Rimler, 1990) invasion and septicaemia usually develop. Virulent strain has been reported to multiply in the bloodstream, liver and spleen before being released into the bloodstream at the terminal phase of the infection (Christensen and Bisgaard, 1997). Multiplication in the liver leads to multiple hepatic necrosis while death is assumed to be due to endotoxic shock (Collins, 1977). Similar pathogenesis is believed to occur following infection by *P. haemolytica* type T in this study. Colonisation of pathogenic strain of *P. haemolytica* type T in the upper respiratory tract (Dungworth, 1985) leads to invasion and septicaemia. During septicaemia, the organism could easily be isolated from the liver and heart swabs.

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