

Letter to Editor

**CYSTIC OVIDUCT IN 27-WEEK-OLD COMMERCIAL BROILER
BREEDER CHICKENS**

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SIR,

Cystic right oviduct is usually observed as an incidental finding at necropsy of hen with distended fluid filled abdomen, resembling those of ascites. Recently, we were presented with a case of 27-week-old commercial broiler breeder chickens with the history of poor egg production (about 50%) and a relatively high mortality of about 5 birds per day for the past two weeks (1.4%) from a flock of 5000 chickens. The affected hens (about 10% of the flock) showed unusual distended abdomen. Ten of them were submitted for necropsy at Universiti Putra Malaysia. On necropsy, the birds were found to have distended abdomen with most (7/10) showing fluid filled contents on palpation, whilst a few (3/10) had firmed materials within the areas (Fig. 1a). On cutting of the skin and subcutaneous tissues of the abdomen, cystic oviduct of about 10 to 15 cm in diameter occupied the abdominal cavity (Fig. 1b). The cyst was covered with a thin layer of the oviduct wall and filled with clear fluids (Fig. 1c). The wall of the cyst was closely packed to the abdominal wall and occasionally the cysts were ruptured upon cutting of the abdominal wall and thus, misleading one to think of ascites. No significant findings were observed in the ovarian follicles; however the lower reproductive tract was hardly identified or absent. A large mass of yolk like materials and coagulated albumin occluding the oviduct were observed in the hens (3/10) which had firmed materials on palpation of the distended abdomen (Fig. 1d). The visceral organs of all the affected chickens such as the liver and kidney were relatively smaller than the non affected chickens. The abdominal air sacs were moderately opaque, whilst the lung was oedematous.

Pancreatic atrophy was also observed in some birds. Histologically, the epithelial lining of the cystic oviduct showed considerable decrease in height in both the mucosal ridges and folds. The loose circular muscular layer and more compact longitudinal muscular layer showed a decrease in thickness (Fig. 2a, b).

It is known that cystic right oviduct can be an incidental finding in necropsy of hens. However, the high incidence in a flock of hen with high mortality and poor egg production is uncommonly reported. In the female chicken embryo, two Muellerian ducts were beginning to develop into oviducts. The left duct developed into a functional oviduct while the right duct regressed. If this regression is not complete, partial development will result in a cystic right oviduct (Hodges, 1974; Riddell, 1991). The reason for the high incidence of cystic oviduct is unknown, although infectious bronchitis virus infection at an early age of the chicken has been suggested to be associated with excessive amounts of orange-coloured fat with liquid yolk or coagulated yolk in the abdominal cavity (Riddell, 1991).

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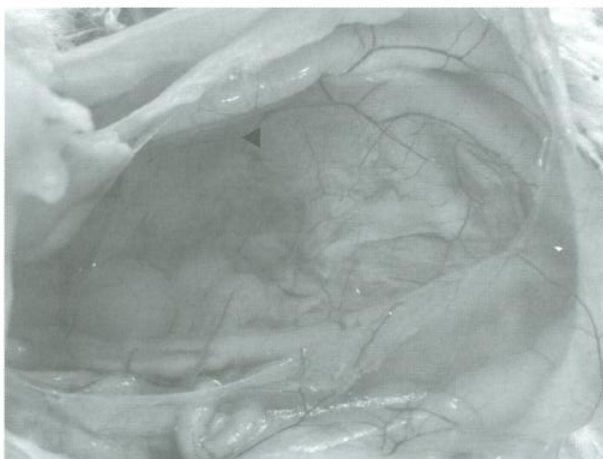
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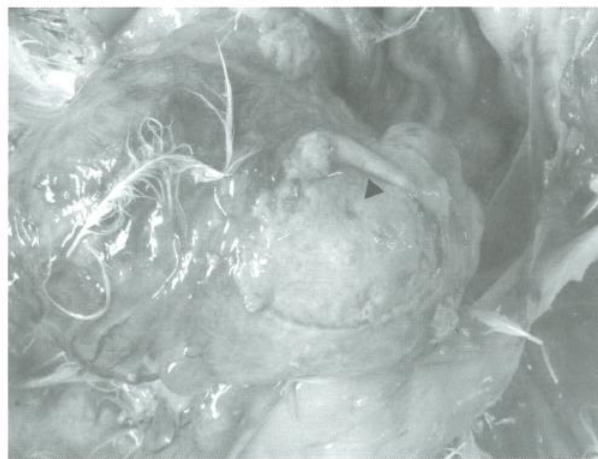
(a)



(b)



(c)



(d)

Fig. 1. Twenty-seven-week-old broiler breeder chickens; (a) over distension of the abdomen; (b) cystic oviduct; (c) clear fluids content of the cyst; and (d) large mass of yolk-like material and coagulating albumin occluded the oviduct.

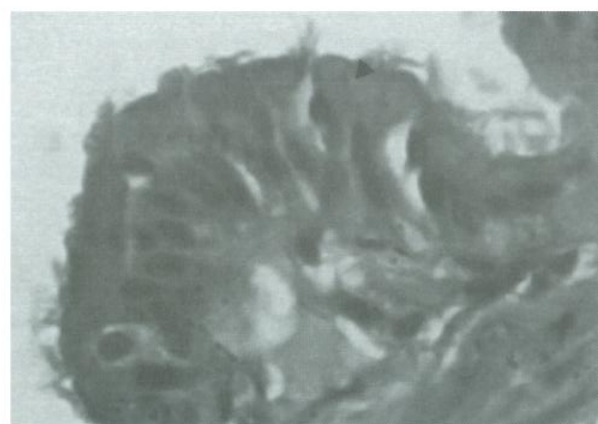
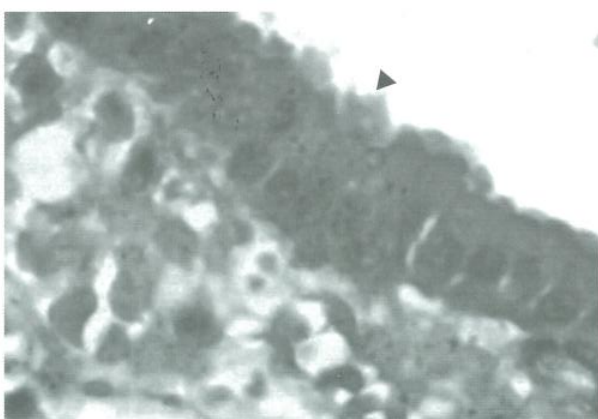


Fig. 2. Epithelial lining of the cystic oviduct: the mucosa ridges have (a) flattened or (b) considerably decreased in height. HE, 400X.