Case Report

A RARE CASE OF COMBINED OVIDUCTAL ADENOCARCINOMA AND LEIOMYOMA IN A WHITE LEGHORN CHICKEN

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ABSTRACT

A rare case of combined oviductal adenocarcinoma and leiomyoma in a white leghorn chicken is reported. Necropsy of an adult female white leghorn chicken, showed distension of oviduct. The oviduct serosa revealed small nodules of about 3 mm diameter and the lumen contained brownish exudates. The oviductal mucosa showed irregular nodules of about 0.5 to 1.5 cm in diameter attached to the mucosa of the magnum. Grossly, the mucosal nodules were firm and pink to grey in colour and serosal nodules were grey white in colour. Histopathologically, oviduct mucosal nodule revealed acinar or tubular pattern of tumour cells separated by fibrous tissue. The oviduct serosal nodule revealed interlacing bundles of smooth muscles cells in various directions. Based on histopathological characteristics, the present case was diagnosed as a rare combined case of oviduct adenocarcinoma and leiomyoma in a white leghorn layer chicken.

Keywords: Adenocarcinoma, Chicken, Leiomyoma oviduct, White Leghorn

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Adenocarcinoma originating in the oviduct most commonly arises in the upper magnum, with occasional tumours seen in the uterus or infundibulum. Oviductal adenocarcinoma in both chickens and turkeys may begin as small nodular areas of mucosal dysplasia (Reece, 1997). The present paper reported the rare combined case of oviduct adenocarcinoma and leiomyoma in a white leghorn layer chicken.

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An adult female white leghorn chicken from Livestock Farm Complex, Veterinary College and Research Institute, Orathanadu, Thanjavur was submitted for necropsy. During necropsy, required tissue samples were collected and fixed in 10% formalin. The tissues were processed, sectioned and stained with Hematoxylin and Eosin (H&E) stain (Bancroft and Gamble (2008)).

On necropsy examination, oviduct was distended and serosa showed small nodules of about 3 mm diameter. The oviductal lumen contained brownish exudates.

The oviductal mucosa at the magnum revealed a few scattered irregular nodules of

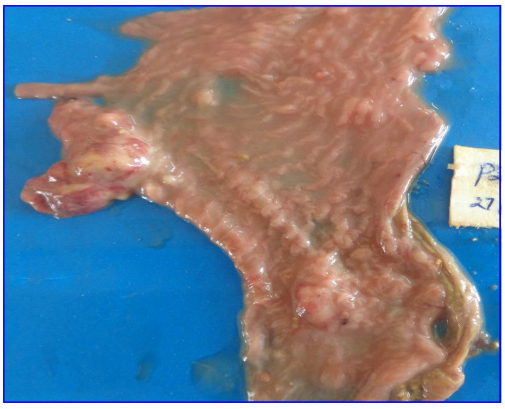

Fig. 1. Oviduct mucosa showing pink to grey irregular nodules of about 0.5 to 1.5 cm in diameter

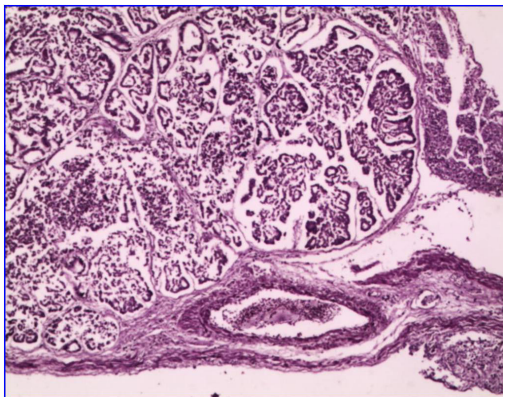

Fig. 2.Oviduct mucosa showing acinar pattern of tumour cells separated by fibrous tissue

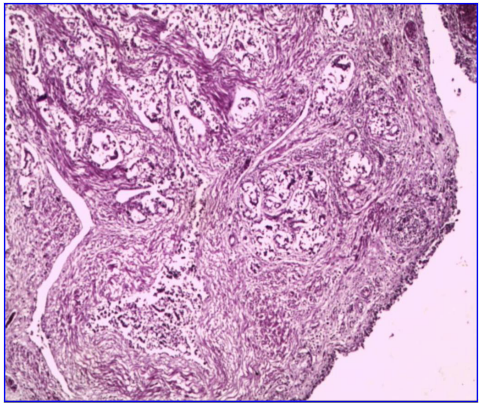

Fig. 3. Oviduct mucosa showing acinar pattern of tumour cells separated by fibrous tissue (H &E 100X)

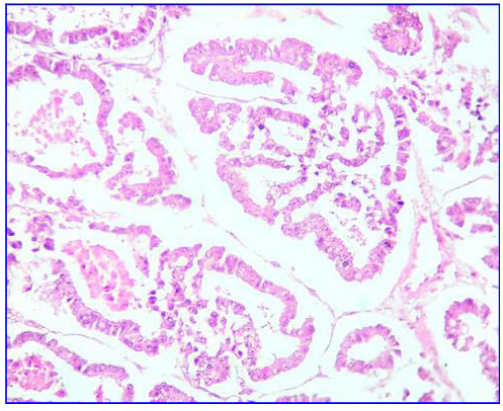

Fig. 4.Oviduct mucosa showing acinar pattern of tumour cells separated by fibrous tissue (H &E 400X)

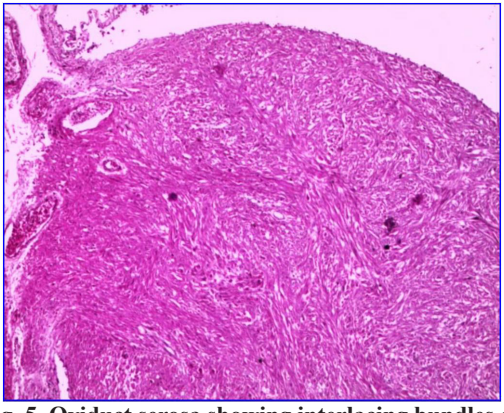

Fig. 5. Oviduct serosa showing interlacing bundles of smooth muscles cells in various directions were also observed (H &E 40X)

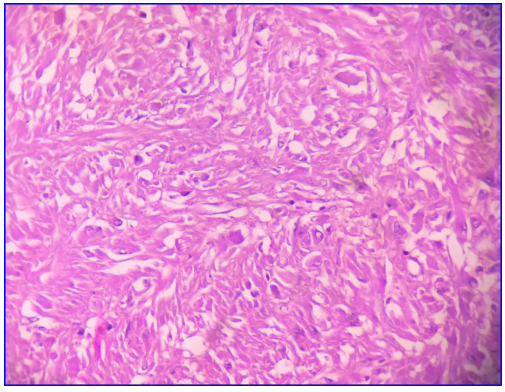

Fig. 6. Oviduct serosa showing interlacing bundles of smooth muscles cells in various directions (H &E 400X)

about 0.5 to 1.5 cm diameter (Fig. 1). Grossly, the mucosal nodules were pink to grey in colour and firm. The serosal nodules were greyish white and firm.

On histopathological examination, the magnal mucosal nodule revealed acinar or tubular pattern of tumour cells separated by fibrous tissue (Fig. 2, 3 and 4). The tumour masses were lined by single or multilayered cuboidal epithelial cells with anaplastic changes. The oviduct serosal nodule revealed interlacing bundles of smooth muscles cells in various directions (Fig. 5 and 6). The smooth muscle cells were spindle shaped with cigar shaped nucleus. Based on histopathological characteristics, the present case was diagnosed as oviduct adenocarcinoma and leiomyoma.

The present case of adenocarcinoma in magnal region of oviduct was in accordance with Yarim *et al.* (2011) who reported oviduct adenocarcinoma in budgerigar and Reavill and Schmidt (2003) who reported three cases of oviductal adenocarcinoma in psittacine birds. The present case of leiomyoma was in accordance with recent reports of Sasikala *et al.* (2018) who reported in Japanese quail and smooth muscle neoplasia in a parrot reported by Antinoff *et al*. (1997).

The rare incidence of combined case of oviduct adenocarcinoma and leiomyoma in the same bird was in agreement with Sonmez *et al*. (2002). In the present case, both epithelial and smooth muscle tumour occurred together in the oviduct of White Leghorn chicken.

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