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Occurrence of Colibacillosis in Emu Chicks (*Dromaius novaehollandiae*)

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Two emu chicks in the age of 4-5 weeks died after showing shivering and dullness. Post Mortem examination revealed hepatomegaly, granulomatous lesions in lungs and congestion of the intestine. Clinical materials such as trachea, heart, lung, liver, kidney, intestine and gizzard were collected and subjected to bacterial isolation. *Eschericia coli* could be isolated from all the specimens collected from both dead emu chicks and the cases were confirmed as colibacillosis. All the *E. coli* isolates were subjected to antibiotic sensitivity test and were found to be sensitive to Enrofloxacin, Ciprofloxacin and Ofloxacin and resistant to Penicillin, Ampicillin, Amoxycillin, Amoxyclav, Erythromycin, Streptomycin, Gentamicin, Doxycycline, Oxytetracycline and Tetracycline.

Key words: Emu - Colibacillosis - Diagnosis - Antibiogram

Emu (*Dromaius novaehollandiae*) belong to ratite group and have high economic value for their meat, eggs, oil, skin and feathers. Recently emu farming has gained much importance in India. India is the second highest and next to China in global emu production (Rajasekhar Reddy, 2010). At present there are 200,000 adult emus in India, out of which 70 per cent are in Andhra Pradesh (Chate Amar Gangadhar *et al*., 2013). Colibacillosis is an infectious and economically important disease of poultry and other birds caused by *Eschericia coli*. Most reported outbreaks in poultry occurred in chickens, turkeys and ducks. Information about the occurrence of colibacillosis in emu birds could not be traced. Keeping in view, the present study describes occurrence of colibacillosis in emu chicks in an organized farm during the month of December 2010 – January 2011.

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MATERIALS AND METHODS

Two emu chicks in the age of 4-5 weeks were reported to have died due to some unknown diseases in an organized farm during the month of December 2010 – January 2011. A disease investigation was carried out to identify the etiological agent of the diseases. These emu chicks were died suddenly without showing any clinical signs except shivering and dullness. Post-mortem was conducted on carcasses. Tissue samples from trachea, heart, lung, liver, kidney, intestine and gizzard were collected in bacteriological transport media and subjected to bacterial isolation as per Barrow and Feltham (1993). Blood smears and liver and tracheal impression smears were subjected to microscopic examination. The *in vitro* antibiotic sensitivity tests were carried out on Mueller Hinton agar as per the method of Bauer *et al*., (1996) using 13 antibiotic discs supplied by M/s. Hi-Media Laboratory, Mumbai.

RESULTS AND DISCUSSION

During the investigation it was observed that the emu showed shivering and dullness. Post-mortem examination of the carcasses revealed hepatomegaly, granulomatous lesions in lungs and congestion of the intestine. Microscopical examination of blood smears and liver and tracheal impression smears revealed no organisms of etiological significance. *Escherichia coli* were isolated from trachea, heart, lung, liver, kidney, intestine and gizzard samples and identified based on morphology, cultural characters and biochemical reaction as per Barrow and Feltham (1993). The antibiotic sensitivity test of *E. coli* revealed sensitivity to Enrofloxacin, Ciprofloxacin and Ofloxacin and resistant to Penicillin, Ampicillin, Amoxycillin, Amoxyclav, Erythromycin, Streptomycin, Gentamicin, Doxycycline, Oxytetracycline and Tetracycline.

Overcrowding, poor feeding, peer ventilation, improper cleaning of urine and fecal materials and general mismanagement of the emu chicks were observed in this study which could be of predisposing factors for the occurrence of colibacillosis. It is suggested to shift all the emu chicks to a well ventilated house and sick animals were treated with Ciprofloxacin 20mg / kg body weight orally twice a day for 5 days and the emus responded well to antibacterial therapy.

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