SPONTANEOUS OCCURRENCE OF POX IN A PIGEON (COLUMBA SPP.)

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Avian pox is a contagious, slow spreading viral disease of birds which occur all over the world (Tripathy and Cunningham, 1984). Spontaneous occurrence of pigeon pox is reported.

A male adult pigeon carcass was brought for post mortem examination with grayish white nodules on the head and legs. Grossly, scattered multifocal firm grayish white nodules ranging from 0.1x 0.1x 0.1 to 0.1x 0.1x 0.5 cm in sizes were seen on the nasal septum, nasal orifice, around the eyes, beak and both the legs (Fig.1)

Multiple light yellowish nodules were seen on the mucosa of mouth, pharynx, larynx and oesophagus (Fig.2). Lungs revealed multifocal black spots adjacent to the borders. Histopathological examination of cutaneous nodules revealed epidermal hyperplasia, presence of intracytoplasmic inclusion bodies in the spinosal cells (Fig.3) and ballooning degeneration of spinosal cells with bacterial colonies (Fig.4). Oesophagus revealed epithelial hyperplasia, presence of intracytoplasmic inclusion bodies and ballooning degeneration of spinosal cells (Fig.5). Lung showed blackish granules in the alveolar walls and connective tissue septa (Fig.6). Based on these findings, the case was diagnosed as pigeon pox and anthracosis.

Pigeon pox is a slow spreading disease which is responsible for morbidity and mortality in all age groups of pigeons. In natural infection, mortality is low but can be complicated with parasitism or poor condition of the flock (Singh et al., 1990). In this case, the bird might have died due to asphyxiation and starvation because of pock nodules in the pharynx and larynx. Gross lesions in both the cutaneous and diphtheritic forms are usually sufficient to suspect pox infection (Tripathy and Reed, 2003). Besides, presence of eosinophilic intracytoplasmic inclusion bodies was suggestive of pox virus infection. Histological features are regarded as definitely confirmatory for the diagnosis in any affected species (Pass, 1996). The pigeon also had anthracosis which could be due to automobile and air pollution consisting of carbon particles in the urban environment.

REFERENCES
Fig. 1: Pigeon pox - Multifocal firm grayish white nodules on the nasal septum, nasal orifice, in and around the eyes, beak and both the legs

Fig. 2: Pigeon pox - Multifocal firm light yellowish nodules on the oesophagus
Fig. 3: Pigeon pox - Skin- Epidermal hyperplasia, intracytoplasmic inclusion bodies and ballooning degeneration of spinosal cells. Scale bar H&E 20 μm

Fig. 4: Pigeon pox - Skin- Epidermal hyperplasia, intracytoplasmic inclusion bodies and ballooning degeneration of spinosal cells with bacterial colonies. Scale bar H&E 20 μm
Fig. 5: Pigeon pox - Oesophagus - Epithelial hyperplasia, intracytoplasmic inclusion bodies and ballooning degeneration of spinosal cells. Scale bar H&E 20 μm

Fig. 6: Pigeon - Lung - Anthracosis - Blackish granules in the alveolar walls and connective tissue septa. Scale bar H&E 20 μm