

HISTOPATHOLOGICAL CHANGES OF PNEUMOENTERITIS COMPLEX
IN NEWLY BORNE CALVES IN EGYPT

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Pneumoenteritis complex is a syndrome affecting young calves from age of one week to 6 - 8 months. The disease was a problem for many years at Military Milk Producing Farm at Giza Province.

Many viruses and bacterial agents has been incriminated in the literatures as the cause of the condition.

In our cases in Egypt PI-3 virus was the most common isolate beside another undifferentiated virus which is under investigations, yet bacteriologically, the isolates were Staphylococci, Streptocci, E.coli, Corynebacterium pyogenes, Pasteurella spp., Micrococci and Yeast.

Clinical findings were summarized by fever, listlessness, inappetance, or anorexia, depression or dullness, moderate amount of mucopurulent nasal discharge, increase in respiration and pulse rate, coughing and laboured breathing. Respiratory signs may or may not be accompanied by diarrhoea, dehydration and emaciation. The morbidity rate was 18% and case mortality rate was 52%.

Post-mortem findings:

The pneumonic lesions in 93% was bilateral while 7% of the lungs were unilateral. The lobes of the right lungs were more affected than the left ones. The lesions in 60% of the pneumonic lungs occurred in portions or all of the apical, cardiac, usually all the intermediate and the anterior portions of the diaphragmatic lobes. The lungs showed lobular consolidation which appeared dark red to purplish red in colour and quite firm on palpation.

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23% of the necropsied lungs showed dark red to purple lobular patches with numerous small greyish foci. 17% of the lungs appeared normal.

The bronchial lymph nodes were congested and oedematous. The intestinal lesions, in 50% of the affected intestines varied from slightly congested to highly inflamed and ulcerated mucosa. 3.3% showed haemorrhagic enteritis while 46.7% appeared normal. Mesenteric lymph nodes were enlarged, oedematous and slightly hyperaemic.

Histopathological findings:

The histopathological changes of the disease was thoroughly studied. The lesions in the lungs of 30 pneumonic calves were broadly divided into 9 pathological groups:

Group A:	Showed bronchitis and bronchiolitis	(16.6%)
Group B:	Showed bronchitis and alveolar collapse	(13.2%)
Group C:	" acute catarrhal bronchopneumonia	(16.6%)
Group D:	" " purulent " "	(6.6%)
Group E:	" " necrotizing " "	(6.6%)
Group F:	" interstitial pneumonia	(13.2%)
Group G:	" inclusion body pneumonia	(6.6%)
Group H:	" cuffing pneumonia	(6.6%)
& Group I:	" mycotic bronchopneumonia	(3.3%)

The intestines were divided into 4 groups:

Group A:	Characterized by acute catarrhal enteritis	(36.6%)
Group B:	" " " necrotic enteritis	(16.6%)
Group C:	" " " haemorrhagic enteritis	(3.3%)
Group D:	" " " No pathological lesions	(43.3%)

Lymph nodes and some other organs were also studied. It is probable that the sever pneumonic lesions encountered in

this survey were the result of interaction between viruses, bacteria and may be yeasts catalysed by poor calf housing and faulty programme vaccination.

The author draws attention to the importance of further studies on the adenoviruses and bovine respiratory syncytial virus in Egypt as causes of mortality in newly born calves.