CORYZA LIKE SYNDROME IN POULTRY

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HISTORY

An upper respiratory tract infection in a flock of 76000 broiler breeders of 54 weeks of age at Islamabad was reported. It was disclosed that the problem occurred at start of October, 1997. The birds were dull, depressed, having facial swelling and lacrimal discharge. The birds reduced their feed consumption. The egg production was reduced upto 5 percent.

CLINICAL AND LABORATORY FINDINGS

Twenty birds were received in Microbiology Section, College of Veterinary Sciences, Lahore for disease diagnosis. These birds were dull and depressed. There was facial swelling, nasal discharge and open mouth breathing. There was mucoid discharge from nares. The post mortem examination revealed that all the organs were normal. However, there was round worm infestation in the intestine of all the birds.

Samples from heart blood, lungs, air sac, liver, spleen and swabs from nares and trachea were streaked on MacConkey's agar, serum agar, chocolate agar, chicken blood agar, nutrient agar and tryptose agar. These media were incubated at 37°C for 24 hours. The bacterial growth was only recovered from nares on enrichment media i.e., chicken blood agar, serum agar and chocolate agar. The colonies were small, discrete and transparent. There was also haemolysis on the chicken blood agar. The isolated bacteria were uniformly distributed. They were Gram negative and pleomorphic coccobacilli. As no growth was recovered on any culturing media from liver, heart blood and lung samples. This ruled out the possibilities of infections caused by either of Pasteurella, Salmonella spp. or *E. coli*.

The swabs from nares, trachea, lungs and caecal tonsils were processed for inoculation in the 11 days old chicken embryos. These embryos were incubated at 37°C. No embryonic death or any other detectable abnormality was observed in any part of the embryos. These observations ruled out the possibilities of Newcastle disease (ND), Infectious bronchitis (IB) and Avian Influenza (AI) infection.

Antibiogram report showed that the isolated organism was sensitive to antibiotics as given below:

Drugs	Sensitive/Resistant
Neuquyl	- - - -
Gentamicin	+ + + +
Imequyl	- - - -
Norfloxacin	+ + + -
Avitryl	- - - -
Furazolidon	- - - -
Amoxicillin	- - - -
Oxytetracycline	- - - -
Chloramphenicol	- - - -
Plasmaqulin	+ + + -

+ = Sensitive
- = Resistant

DISCUSSION

The birds in the infected flock had facial swelling, nasal discharge, open mouth breathing and mucoid discharge from the nares. These clinical signs are common features of coryza (Haemophillus infection) (Droual *et al.*, 1990; Horner *et al.*, 1992: Mouahid *et al.*, 1992: Sandoval *et al.*, 1994), fowl cholera (Calnek, *et al.*, 1991), ND (Allan *et al.*, 1978) and IB infections (Hofstad and Yoder, 1966). The coryza is an upper respiratory tract infection caused by *Haemophillus paragallinarum*. The bacterium is normal inhabitant in the healthy birds (Calnek *et al.*, 1991). The round worm infestation and other environmental stress factors might have potentiated the susceptibility of the birds.

The bacteria were recovered only from nares on serum, chocolate and blood agar. The growth and morphology characteristics indicated that isolated bacterium might be the cause of coryza like syndrome. The organism has affinity with blood so can be stated as Haemophilus species. Its growth on serum agar indicated that the local isolate was independent of NAD V-factor. Similar observations were recorded by Horner *et al.* (1992), Bragg *et al.*, (1993) and Miflin *et al.* (1995).

The affected flock was treated with gentamicin: the most effective antibiotic as displayed in the antibiogram

assay. As reoccurrence has been recorded in the infected flocks that necessitated prolong medication of the birds. However, prolong medication is not economical, so it is advisable to vaccinate the birds with oil based vaccine containing all prevailing variants of the pathogen.

In Pakistan so far no work has been done on etiology of coryza. Therefore, attempts on isolation and serotyping of the indegenous pathogen and preparation of polyvalent vaccine are suggested.

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