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Serological and histopathological evidences of chickens infected with avian pneumovirus

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Abstract

The aim of this study was to know the etiological agent of mortality which occurred in broilers and parent stocks farms in Ninawa province. The main noticed symptoms was swollen head. The suspected samples were inoculated in to embryonated egg to isolate the suspected virus. Neutralization test was performed using hyperimmune serum of pneumo virus and sera from infected birds. Experimental infection via nostrils was performed, samples from bronchi and lungs were taken for histopathological examination. Results showed that gross lesions were observed after second passage of isolates, two which showed mortality after first passage. Hyperimmune serum and sera from infected birds neutralized the isolates, there was variation among isolates. Histopathological picture showed congestion of bronchiole , hemorrhage between alveoli with clot in most of blood vessels with in the lung.

Available online at <http://www.vetmedmosul.org/ijvs>

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(AMPV)
Paramyxo

Avian metapneumo virus
. () virus

swollen head syndrome (SHS)
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(APV) Avian pneumovirus .()

.() .() Vero

APV
(AMPV) " .() (PCR)
A , B, C, D
B A .()
C D

0.2ml 2 x 10^{3.4} EID50 0.5 "

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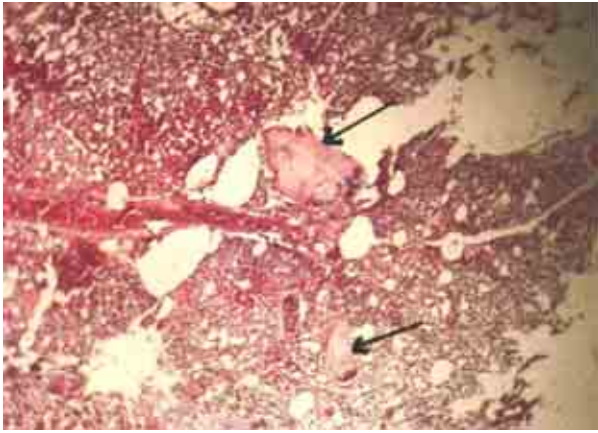
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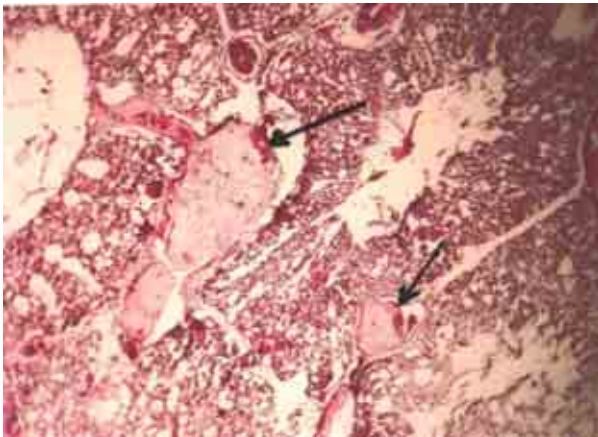
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1	30%	55%	++	+	+	+	+	++
2	50%	80%	+++	++	+	+	++	++
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1	P1	$10^{1.2}$	-	-	-	-	-
	P2	$10^{2.7}$	-	+	-	-	120
	P3	10^1	+	+	-	+	96
	P4	$10^{3.4}$	++	++	+	+	96
2	P1	$10^{1.3}$	-	-	-	-	-
	P2	$10^{2.2}$	+	-	-	-	120
	P3	$10^{2.9}$	++	+	-	+	96
	P4	$10^{3.6}$	++	++	+	++	72

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1	$10^{3.4}$	$10^{1.4}$	$10^{3.2}$
2	$10^{3.6}$	$10^{1.2}$	$10^{1.1}$

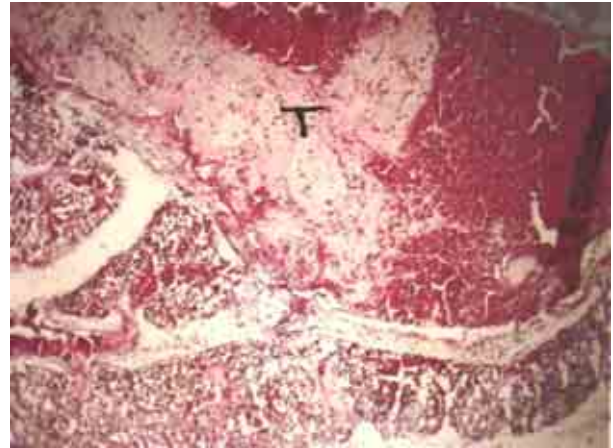
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1. O'Brien J. Swollen head syndrome in broiler breeder. *Vet Rec.* 1995; 117:619–620.
2. Jones RC, Naylor CJ, Bradbury JM, Savage CE, Worthington K and William RA. Isolation of turkey rhinotracheitis like virus from broiler breeder chickens in England. *Vet Rec.* 1991;129:509 – 510.
3. Pattison M and Chette NJ. Observation on swollen head syndrome in broiler and broiler breeder chickens. *Vet Rec.* 1989;125:229 – 231.
4. Pringle CR. Virus taxonomy – 1999. The universal system of virus taxonomy up date to include the new proposals ratified by the international committee of taxonomy of the virus during 1998; *Arch Virol.* 1999;144:421– 429.
5. Kleven SH. Report of the committee transmissible diseases of poultry and other avian species , P. 486–491. In proceedings of the 101st annual meeting of the U. S. Animal Health Association. Richmond. Va. 1997.
6. Kumar M. Incidence of APV in the field. P. 18 – 20. In Proceeding the 50th north central Avian pneumovirus. Virus disease conference. University of Minnesota, Minneapolis, Minn. 1999.
7. Gough RF, Collins MS, Cox WJ, Chettle NJ. Experimental infection of turkeys , chickens , ducks geese , guinea fowl , pheasants and pigeons with turkeyrhinotracheitis virus.*Vet Rec.* 1998;120:301–302.
8. Collins MS and Gough RE. Characterisation of a virus associated with tunkey rhinotracheitis. *J Gen Virol.* 1988;69:909–916.
9. Alexander DJ, Manvell RJ, Collin MS and Brock Man SJ. Evaluation of relation ship between avian paramyxovirus isolated from birds of columbidae family. *Arch Virol.* 1991;114:267–276.

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APV

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G

glycoprotein

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- McDougali JS and Cook JKA. Turkey rhinotrachitis preliminary investigation. *Vet Rec.* 1986;118:206 – 207.
14. McDougali JS and Cook JKA. Turkey rhinotracheitis preliminary investigation. *Vet Rec.* 1981;118:206–207.
15. Bennett RS, Njenga HK, Nezworski J, Velayndhan BT, Nagaraja KV, Halvorson DA. Evidence of avian pneumovirus spread among wild birds and domestic turkeys in central north America. *Avian Dis.* 2004;48:902 – 908.
16. Hamelin ME, Abed Y and Boivin G. Human metapneumoviruses. *Clin Infect Dis.* 2004;38:983 –990.
17. Jirjis FF, Noli SL, Halvorson DA, Nagaraja KV and Shaw DP. Pathogenesis of Avian pneumovirus infection in turkeys *Vet Pathol* 2002;3913:300 – 310.
10. Redmann TH, Kamphausen L, Hafez HM and Kalela EF. Serological studies of the prevalence of turkey rhinotracheitis virus in Germany. *Tierarztliche Umschau.* 1991,46:660–664.
11. Cook JK, Huggins A, Woods MB, Orbell SJ and Mockett APA. Protection provided by commercially available vaccine against different strains of turkeyrhinotracheitis virus. *Vet Rec.* 1995;136:392 – 393.
12. Reed IJ and Meunch A. A simple method of estimating fifty percent end points. *Am J Hyg.* 1938;27:493–497.
13. Senne DA and Edson RK. Avian pneumovirus update P. 190. In *Proceedings of the 134th, Annual convention of the American Veterinary Medical Association.* Spectrum Press. Reno. Nev. 1997