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ARABIC ABSTRACT	(٣-١)

List of abbreviations

1-HEMATOLOGY

RBcs	:Erythrocytes count in millions/ul blood
Hb	:Hemoglobin concentration in gm/dl
PCV	:Packed cell volume in %
MCV	:Mean corpuscular volume in femto litre(fl).
MCH	: Mean corpuscular hemoglobin in picogram (pg).
MCHC	:Mean corpuscular hemoglobin concentration %
TLC	: Total leucocytic count in thousand /ul blood
Hetero.	: Heterophil count in thousand /ul blood
Eosino.	: Eosinophil count in thousand /ul blood
Basoph.	: Basophil count in thousand /ul blood
Lympho.	: lymphocyte count in thousand /ul blood
Monocyte	: Monocyte count in thousand /ul blood
P.M.	: Post Mortem

II. BIOCHEMISTRY.

S.AST	: Serum Aspartate AminoTransferase (serum glutamic oxalacetic Transaminase-GOT) in units/ml.
SALT	: Serum Alanine Amino Transferase (serum pyruvic oxalacetic Transaminase-GOT) in units/ml.
Alb.	: Albumin gm/dl
Glob.	: Globulin gm/dl

A/G ratio : Albumin gm/dl / Globulin gm/dl Ratio

III. CHEMICAL

P. B. S. : Phosphate Buffer Saline

IV. STATISTICAL ANALYSIS

*Significant : At less than 0.05 probability.

**Highly Significant : At less than 0.01 probability.

V. OTHERS

I.N.T. : infected non treated

I.T.N.S. : infected treated Nigella Sativa

I.T. vit. E : infected treated vitamin E

N.I.T.N.S. : non infected treated Nigella Sativa

N.I.T. vit. E : non infected treated vitamin Es

Summary and conclusion

Colibacillosis is considering one of the most chronic bacterial disease in Egypt and world. Although were a lot numbers of effective and expensive antibiotics which don't can get red of this problem and make a stress conditions on bird also consumers because its bad effect of drug residue in the tissues and organs.

So this study try to control this problem by non traditional way by elevate the immune status and performance of bird for facing the E. coli. And more investigation for studies the effects of this immuno stimulant on the bird without infection

This study done on 120 birds from broiler chicken age 1st to 5th days old and divided into 6 group as follow:

- 1- infected non treated
- 2- infected and treated by *Nigella sativa*
- 3- infected and treated by vitamin E
- 4- non infected treated by *Nigella sativa*
- 5- *non infected treated by vitamin E*
- 6- non infected non treated (control)

The evaluation and comparative between *Nigella sativa* and vitamin E based on the whole blood picture, blood chemistry as plasma protein, albumin and globulin as well as electrophoreses for globulin fraction alpha, beta and gamma and also liver enzymes as AST & ALT ,and uric acid for kidney assessment.

Also evaluation by stimulating measurements as *lymphocytes index*, *bursa index* and *antibodies titer* against new castle in birds.

The result showed their was normocytic normochromic anemia caused by E. coli infection , also leukocytosis attributed to heterophilia, monophilia accompanied by

lymphopenia and easinopenia and that a picture of stress condition, also their was decrease in plasma protein albumin and increase in globulin due to infection .

The immunological result showed the *Nigella sativa* have a good immuno stimulant effect and increase the effectiveness of birds than vitamin E .

The histo pathological results showed

Liver : congestion in blood vessels , focal hemorrhages with leukocytic infiltration .

Lung : congestion of pulmonary blood vessels , leukocytic infiltration, massive hemorrhages .

Intestine : hyperemia of intestinal and serosal blood vessels in addition to inflammatory cellular infiltration of lamina propria.

Spleen: sub capsular congestion and heterophilic infiltration.

Kidney : tubular degenerative changes and focal hetrophilic infiltration.

Finally the comparative between *Nigella Sativa* and Vit E in our study showed that :

- 1- Collibacellosis in broiler chicken cause hematological, Hepatic, Renal affection.
- 2- There is a good immuno stimulating parameter especially in *Nigella Sativa* than in Vit E
- 3- *Nigella Sativa* showed good performance for facing the experimental infection with E Coli than was confirmed by the result of our subject.

Conclusion

- 1- Chicken are susceptible to experimental infection with E coli strain 078 and cause typical colibacillosis.
- 2- The trials to elevate the immune response of bird is effective especially in *Nigella sativa* than vitamin E.
- 3- *Nigella sativa* has a good effect for facing colibacillosis and act as bactericidal substance .
- 4- *Nigella sativa* had significant immuno stimulant in non infected bird than vitamin E.
- 5-We must increase research about non traditional chemical drugs for prevention and controlling diseases to avoid side effects of antibiotics and drug residue.