Contents

Page

LIST OF TABLES..... ii
LIST OF FIGURES.....iii
INTRODUCTION.....1

REVIEW OF LITERATURE.....3

2.1 HISTORY , INCIDENCE AND SIGNS OF ORT IN POULTRY.....3

2.2 NECROPSY FINDINGS AND HISTOPATHOLOGICAL CHANGES.....10

2.3 METHODS OF ISOLATION AND IDENTIFICATION.....16

2.4 PATHOGENICITY.....22

2.5 CHEMOTHERAPY, IMMUNIZATION AND DISINFECTANTS.....26

MATERIAL AND METHODS.....31

3.1. MATERIAL.....31

3.2. METHODS.....35

RESULTS.....41

DISCUSSION.....65

SUMMARY AND CONCLUSION.....72

REFERENCES.....74

ARABIC SUMMARY

SUMMARY AND CONCLUSION

-Thirty five isolates of *Ornithobacterium rhinotracheale* could be isolated from 646 samples from chickens, ducks and turkeys from Upper Egypt Governorates. We could recover 19 isolates from broiler and layer chickens, 11 isolates from ducks and 5 isolates from turkeys with percentage of 5.8, 9.3 and 2.5% respectively and this isolation occur from trachea, lung and air sacs

-Bacteriological and biochemical identification of 35 isolates reveal typical ORT characters.

-Serotyping of ORT isolates using Agar gel precipitation test (AGPT) proved that all ORT isolates belonged to serotype A.

-Sensitivity test against 20 different antibacterial agents was carried out and revealed that ORT isolates were highly sensitive to amoxycillin, ampicillin and chloramphenicol while all of them were resistant to gentamycin, sulphadiazine and rifampcin.

-Pathogenicity test was carried out in 14 days old broilers and 10 days old ducks , through aerosol challenge with ORT alone which revealed mild respiratory signs with mild tracheitis, unilateral pneumonia and mild airsacculitis while the affection become more severe in case of oncomitant ORT with NDv.

-It is clear that after inoculation of ORT isolate into yolk sac of embryonated chicken egg, resulted in death of the embryos with their congestion at the ninth day of inoculation

-The histopathological picture of ORT infected groups were necrotic tracheitis, the air sacs severely thickened with accumulation of large amount of fibrinoheterophilic exudation overlaying the epithelial layer and lungs showed fibrinoheterophilic pneumonia.

From the results obtained in this work , we can conclude that:

1-The incidence of ORT infections in chicken , ducks and turkeys in upper Egypt Governorates was 5.8%, 9.3% and 2.5% respectively from living and sacrificed birds and this consider high percent specially in ducks *Ornithobacterium rhinotracheale* play apart in respiratory signs either alone or with other microbial agents, causing no mortality and the mortality may attributed to other microorganisms.

2-Isolation of ORT is considered the first recovary of this organism from duck in Egypt.

3-The high percentage of isolation from ducks may be due to the unuse of drugs and bad management or other factors.

4-The post mortem lesions especially "yogurt like" exudates in the abdominal air sacs is considered very important in diagnosis ORT infection.

5-Sensitivity testing of ORT isolates is essential to determine the drug of choice for each condition.

6-In the future trails for preparation of autogenous bacterin from the unique isolated serotype is of great importance to prevent the infection with ORT.