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List of abbreviations

SPA	Serum plate agglutination test.
HI.....	Haemagglutination inhibition test.
HA.....	Haemagglutination test.
ELISA.....	Enzyme linked immunosorbent assay.
PCR.....	Polymerase chain reactions .
AP-PCR.....	Arbitrary primed polymerase chain reactions .
CRD.....	Chronic respiratory disease.
SDS-PAGE.....	Sodium dodecyl sulfate-polyacrylamide gel electrophoresis.
PPLO.....	Pleuropneumonia like organism.
RPA.....	Rapid plate agglutination .
MA.....	Micoagglutination .
M .g.....	Mycoplasma gallisepticum.
MS.....	Mycoplasma synoviae.
SAT.....	Serum agglutination test .
IF.....	Immunofluorescent antibody.
MIC.....	Minimal inhibitory concentration.
IgG.....	Immunoglobulin G.
RNA.....	Ribonucleic acid.
DNA... ..	Deoxy- ribonucleic acid.

7 -SUMMARY

Avian *Mycoplasmosis* constitutes a major economic problem. *M.gallisepticum* is the most important *Mycoplasma* pathogen affecting commercial poultry flocks, contributing in infection designated as chronic respiratory of chickens. Therefore, accurate and rapid diagnosis is essential for controlling this problem.

Aim of this work:-

This study was applied to investigate the rate of isolation of *Mycoplasma gallisepticum* in broiler chickens and its hazard effects in Kafr EL-Sheikh governorate.

This study included the following items:

Examination of broiler flocks including 300 chickens of different ages ranged from 10- 48 days obtained from different localities at Kafr El. Sheikh governorate. These flocks were suffering from respiratory manifestations.

Seven hundreds samples were collected from 300 broiler chicken at different ages from different localities at Kafr El. Sheikh governorate for isolation of *Mycoplasma*. Also 300 serum samples were collected for biochemical and serological identification of *Mycoplasma*.

Results indicated that (19.6%) *Mycoplasma* isolates were recovered 137 from 700 samples collected from tracheae,(200),lungs(200) and air sacs(200) and 100 oropharyngeal swabs from 300 examined broiler chickens .The highest isolation rate 52out of 175 (29.7%) was from chickens at the age group35-44 days. While the lowest rate 18 out of 175 (10.3%) was at the age group10-20 days.

The percentage of isolation of *Mycoplasma* from lungs tracheae, air sacs and oropharyngeal swabs were (24 out of 200) 12%, (35 out of 200) 17.5 % and (65 out of 200) 32,5 %, (13 out of 100) 13% respectively.

The isolates of *M. gallisepticum* from the lungs, tracheae, air sacs and oropharyngeal swabs of the examined naturally infected broilers were 5.8%, 9.4%,16.2% and 4.4 respectively. The highest percentage of isolation of *M. gallisepticum* was at the age group 35 - 44 days and the least percentage was at the age group 10- 20 days.

300 serum samples were collected from naturally infected broiler chickens, were tested for the presence of antibodies against *M. gallisepticum* by SPA where 168 (56%) samples were positive and 132 (44%) were negative.

Examination, of the serum samples collected at the age ranging 10-48 days from naturally infected broiler chickens by ELISA revealed that 144 samples out of 300(48%) were positive, 141 samples out of 300 (47%) were negative and 15 samples out of 300 (5%) were suspect.

In vitro antibiotic sensitivity test was carried out to study the sensitivity test of the representing *M. gallisepticum* isolates for 13 different antibiotics. The results revealed that *M. gallisepticum* isolates were highly sensitive to Oxytetracycline(91.8%), Enrofloxacin(85.7%)and the least activity were with Erythromycin(10.2%) and Amoxicillin(6.12%).