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List of Abbreviations

SIM media : Sulfide Indole Motility media.

KIA media : Kligler's Iron Agar media.

TSI media : Triple Sugar Iron media.

TSI test : Triple Sugar Iron test.

DTCs reagent : Dinitrophenylhydrazine- Thiourea- Copper sulfate reagent.

FEV : Forced Expiratory Volume.

FVC : Forced Vital Capacity.

SUMMARY

A total number of (120) native- breeds sheep of both sexes, aging from 1 month up to 2 years old, constituted the material of this investigation. The animals belonged to Beni-Sand farm, El-Kusya, El- Hawatka and Assiut abattoir in Assiut Governorate.

All animals in this study were exposed to careful clinical examination, (45) sheep were apparently clinically healthy, while (75) were suffering from pneumonia.

Bacteriological examination of tracheal swabs and lung tissue samples from both slaughtered clinically healthy and pneumonic sheep were done for detection of the causative agents of pneumonia.

Parasitological examination of faecal samples from sheep suffered from pneumonia, to detect the presence of lungworm eggs and larvae (*Dictyocalous filaria*).

Blood serum samples were obtained from both apparently clinically sheep and pneumonic ones, and analyzed biochemically for the following parameters :

Vitamin A $\mu\text{g}/\text{dl}$

Beta-carotene $\mu\text{g}/\text{dl}$

Vitamin C mg/dl

Vitamin E $\mu\text{g}/\text{dl}$

I-Bacteriological examination of tracheal swabs and lung tissue samples from apparently clinically healthy sheep revealed that:

The most common bacteria isolated was *Staphylococcus epidermidis* (30%), while *Enterobacter aerogens* and *Antheracoids* (18.6%) for each, then *E. coli* (17.1%) and lastly *Staphylococcus aureus* was represented by (15.7%).

The results of bacterial examination of sheep suffered from pneumonia indicated that *Klebsiella pneumonia* (16.6%) was the most common bacteria isolated, *E. coli* was (13.2%), while *Staphylococcus aureus* & *Staphylococcus epidermidis* were represented (12.4%) for each, then *Corynebacterium diphtheria* (11.7%), followed by *Pseudomonas aeruginosa* (10.3%), then *Citrobacter freundii* and *Pasteurella spp.* were represented by (6.2%) for each, then *Serratia marcescens* and *Proteus vulgaris* were (3.4%) for each. While the lowest percentage of the isolated bacteria were *Yersinia enterocolitica* & *Antheracids* (2.1%) for each.

The incidence of bacteria isolated from lung tissue samples comparing with tracheal swabs in both healthy and pneumonic sheep in this study, revealed that percentage of bacteria isolated from lung tissue samples were differed from that isolated from tracheal swabs of the same animal.

II-Parasitological examination results revealed the presence of *Dictycaus filaria* in (10%) of the examined pneumonic sheep faeces by Vidia technique.

A higher percentage of infection with bacterial pneumonia among sheep was observed during winter time (46.9%) followed by autumn (34.3%) and then spring (12.5%) and summer (6.3%), while in parasitic pneumonia the highest percentage was observed during autumn (49.1%), followed by winter (31.4%) and then spring (14%) and summer (5.5%).

III- Blood Serum analysis:

There was a highly significant decrease ($P < 0.01$) in the level of blood serum vitamin A ($\mu\text{g}/\text{dl}$) and significant decrease ($P < 0.05$) in beta-carotene ($\mu\text{g}/\text{dl}$) in pneumonic sheep, if compared with their level in apparently clinically healthy sheep.

A significant decrease ($P < 0.05$) in level of blood serum vitamin C (mg/dl) in pneumonic sheep if compared with their level in apparently clinically healthy ones was observed.

Non-significant decrease was recorded in blood serum vitamin E in pneumonic sheep if compared with serum vitamin E level in apparently healthy one.

From all the previous it can be concluded that :

The most common causative agents of pneumonia in sheep which are kept in the studied area is bacterial agents. Meanwhile the environment isn't encourage for developing of parasitic pneumonia.

The presence of high percentage of pneumonia in sheep kept in Assiut city could be attributed to the polluted environment in the city, which can act as a predisposing factor for increasing of respiratory diseases.