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SUMMARY

Lungworm infection among sheep was studied in different localities of the North coast of Egypt, to investigate the prevalence of infection in that area. As well as to determine the most effective method for diagnosis of the disease in sheep. In this study a trial for comparative diagnostic methods such as post-mortum examination, faecal and serological diagnosis were evaluated. Also, a comparative study for evaluation of both ELISA and Immunoblot using two types of antigens, adult worm and larval antigens of *D.filaria*.

A total number of 1300 animals of Barky sheep were used in this study. From these animals, faecal samples were collected and examined using Baermann technique for demonstration of first-stage larvae of lungworms. Also 101 animals slaughtered at Matrouh abattoir, from these animals blood samples, lungs, and intestinal contents were examined.

The results of these studies revealed that:-

The incidence of lungworm infection among sheep in the North coast of Egypt was found to be 26.77%.

The seasonal incidence among sheep was found to be 42.77%, 19.09%, 14.06%, and 31.33% in winter, spring, summer, and autumn respectivily.

Regarding the relationship between age of animals and rate of infection, the incidence was found to be 11.17%, 26.83%, and 40.41% among lambs of about 6 months old, yearlings of about 1-2 years old, and older sheep over 2 years old respectivily.

Identificaton of lungworm species present the North cost of Egypt revealed that the incidence of D.filaria was 18.46%, and P.rufescens was 8.30% of total examined animals.

Concerning the morphology of lungworms and their larvae that were found in infected animal were discussed. Perminant mount were made and photographed included D.filaria and P.rufescens.

Hyperimmune sera were prepared in rabbits using (AWA) and (LA) to be used in ELISA technique and Immunoblot as a control positive sera.

The results of post-mortum examination of slaughtered animals revealed the presence of D.filaria worms inside lungs of 25 out of 101 examined cases. ELISA technique using adult worm antigen indicated 34 positive cases, and by using larval antigen indicated 21 positive cases. Examination of intestinal contents revealed the presence of D.filaria larvae in 18 cases only.

Immunoblot technique was adopted to four groups of serum samples according to ELISA results. Two groups of positive ELISA were agree with Immunoblot, while group (3) differed.

The results obtained indicated that (AWA) was most suitable for diagnosis of diagnosis of D.filaria infection in sheep using ELISA technique,while larval antigen was more specific immunogenic epitope for diagnosis using Immunoblot technique. It is concluded that use of

Immunoblot technique in diagnosis of lungworms recquire more further researches concerning adult worm antigen.