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OCCURRANCE OF DUCK TRICHOMONIASIS AT QENA GOVERNORATE EGYPT

By

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تريكومانس البط في محافظة قنا - مصر

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تم عزل وتصنيف التريكومانس جالبيتيرم فار آنتي للمرة الأولى بمحافظة قنا
وفد تم تجريب بعض الأدوية ومستخلصات النبات على الطفيل المعزول ، وجد أن عصارة
الثوم لها تأثير مضاد للطفيل ، وعلى الجانب الآخر أن الأدوية المستعملة في المصل ليس لها
تأثير على الطفيل .

SUMMARY

The isolation and identification of *Trichomonas gallinarum* var *anatis* was carried out for the first time at Gena Governorate, Egypt. The effect of some drugs and plant extracts on the parasite in vitro were carried out. Garlic Juice (*Allium Sativum*) has been found to have an antiparasitic effect while the other drugs used had no effect on the parasite.

INTRODUCTION

Trichomonas Gallinarum was recorded in lower digestive tract and liver of many kinds of birds (MARTIN and ROBERTSON, 1911 and DIAMOND, 1957).

Many reports on *Trichomonas* concerning its morphology, biology, habitat and pathogenesis, were given by (KOTLAN, 1923; WALKER, 1948; DELAPPE, 1957; STABLER, 1957 and ABU-EL-MAGD & EL-BADRI, 1991).

The present work is a report on the infection of ducks at Gena Governorate (*Trichomonas* protozoa). Again description of pathological lesions, cultivation and effect of some medicaments in vitro.

MATERIAL and METHODS

Birds

Five adult slaughtered balady ducks were brought to the Laboratory. Examination revealed the presence of abnormal structure in the distal parts of oesphagus of 3 ducks and in the liver of the other two ducks.

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Chemicals:

Sodium hydroxid 10%.

Media:

- Normal saline contains 1 gm. streptophenisol (Misr) per 250 ml. (pH: 7.3-7.8).
- Nutrient broth contains 1 gm. streptophenical (Misr) per 250 ml (pH: 7.3-7.8).
- Tryptose broth medium after ABD-EL GAWAD et al. (1981).

Stains:

- Stock Giemsa solution.
- Buffered giemsa solution (1 ml. stock giemsa solution + 15 ml. buffered dist. water, pH 7.2).

Medicaments :

- | | |
|------------------------------------|-------|
| - Flagyl (Alexandria) | 10 mg |
| - Furaltadone Hcl. W.S. 20% (Ceva) | 10 mg |
| - Terramycin 20% (Pfizer) | 10 mg |
| - Copper sulphate | 10 mg |
| - Garlic jice | 10 mg |

Each of the mentioned drugs was dissolved in 10 ml sterile normal saline (pH 7.3-7.8). Then 1 C.C. from each previous dilution was added to equal volume of the cultivated parasite solution incubated at 37°C for 48 hours.

Parasitological manipulation :

1- A small parts from the Lesions in the oesphagus and liver, was boiled in 10% Sod. hydroxid solution. For 2 minutes, few drops from the above solution were examined microscopically.

2- Direct smear examination: Slide films were made from the lesions in the oesphagus and liver. Some of them were directly examined for the motility of the parasites according to ABD EL GAWAD et al. (1981) and other films were dried, fixed and stained with stock Giemsa without dilution and other slide was stained with buffered Giemsa solution after CROWN (1977).

3- Culture technique method: cheesy materials from lesions were inoculated into nutrient broth, normal saline and tryptose broth (ABD EL GAWAD et al., 1981) and incubated at 37°C for two weeks. They were examined for the viability of the parasites in vitro 2,4,6,24,48 hours and one month, after the incubation of the treated and control ones.

RESULTS

The post mortum examinations of 5 slaughtered ducks revealed hard enlarged structures in the size of duck egg, yellowish white in colour were located in the distal part of the oesophagus, the cut sections of those structures were outer thin capsule, hard cortex and cheesy brownish masses in the centers. In two of the sloughtered ducks, the livers were very enlarged nodular in appearance with greenish yellow cystic

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structures contains greenish viscus fluid and yellowish cheesy materials in the cut-sections of the big liver, there were a cystic structures in the liver contains a reddish fluid. Spleen and heart were very enlarged with a yellowish patches on the surfaces of spleen and heart contains cheesy materials.

Microscopical examinations of the boiled pathological material in 10% Sod. hydroxid and direct fresh smears from the lesions revealed the presence of pyriform motile parasites with flagellated movements. Also, the fixed stained smears with Giemsa appeared unipyrimform or twin-pyriform faint blue parasites which identified as Trichomonas gallinarum (DIAMOND, 1957) var anatis (SOULSBY, 1968).

The cultivated organisms had survived for one month in normal saline as well as in tryptose broth medium without any subcultures.

Studying the effect of some drugs and garlic juice on the viability of the organisms, in vitro, investigated that the garlic juice had an antiparasitic effect, while the other used drugs had no effect on the parasite (T.anatis). All the cultivates parasited in the tubes containing the garlic juice died within two days of incubation on comparing with other tubes containing other used drugs where the parasites were still alive similar to those in the control tube.

DISCUSSION

In this investigation no mortality among the native balady ducks, but the pathological lesions in the distal part of the oesphagus and the liver were due to the infested with Trichomaonas gallinarum var. anatis (KOLTAN, 1923) patasite was isolated for the frist time from ducks at Gena Governorate, however DIAMOND (1957) has been found this organism in the lower digestive tract and sometimes the liver of Canad gooes, and KOLTAN (1923) has mantianed other trichomonads of domestic birds include Trichomoans anatis from ducks.

The absces like formations in the liver tissues might be due to a hepato-toxin excreted as a result of the infection with Trichomonas (MESA et al., 1961).

In this work when sodium hydroxid 10% as a solvent liver tissues by boiling it revealed that, the organism resiste the boiling sod. hydroxid 10% for 2 minutes, this investigation was first recorded in Egypt accorolng to the avaliable paperes in our hands. Several trials for the maintanace of the organism in the using of normal saline to which strepto-phenicol were added (pH 7.3-7.8) as a medium, gave a good result and it could be used for parasitic cultivation ABU-EL MAGD et al. (1991), also nutrient broth contains streptophenicol (pH 7.3-7.8) could be used as a medium for parasitic cultivation and mentainces for 2 weeks. However, tryptoes broth medium was an expene-sive one, it proved to be suitable for its cultivation as ABD EL GAWAD et al. (1981). Studying the effect of the used drugs and garlic juice on Trichomonas proved that garlic juice was of great efficacy on Trichomonas organisms in culture medium. However, further experimental infection is still runing to study effect of isolated Trichomonas organism on living duckling.

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