

التشخيص السيرولوجي للأنبلازيموزس في الجاموس المصري

س. ١٠٠ ميخائيل ، ع ١٠٠ الرفاعي

الملخص العربي

أستعمل اختبار أنابيب التجلط السيرولوجي (ريسنك ١٩٦٢) لفحص سيرم دم ٢٥٨ جاموسة
مصرية سليمة اكينيكليا وكانت النتيجة هو وجود نسبة ١٨٪ من هذه الحيوانات حاملة للطفيل .

بفحص أفلام الدم المصبوغة من هذه الحيوانات ظهرت نتيجة ايجابية لطفيل الانابلازما أو تراكيب
متشابهة له في ٤٢٪ من الحالات .

يقترح الباحثان عدم الاعتماد على فحص أفلام الدم المصبوغة عند عمل احصائيات لنسبة الاصابة
لطفيل الانابلازما في الجاموس .

تاریخچه و سیر تکاملی زبان فارسی در دوره ساسانی

مؤلف: دکتر ...

فصل اول

در این فصل به بررسی سیر تکاملی زبان فارسی در دوره ساسانی پرداخته می‌شود. در ابتدا به وضعیت زبان فارسی در آغاز ساسانیت اشاره می‌گردد. سپس به تغییرات دستوری و صرفی در این دوره پرداخته می‌شود. در ادامه به بررسی واژگان و معنی‌های جدیدی که در این دوره به زبان فارسی اضافه شد، پرداخته می‌شود. در پایان این فصل به جمع‌بندی تغییرات و سیر تکاملی زبان فارسی در دوره ساسانی پرداخته می‌شود.

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SEROLOGICAL DIAGNOSIS OF ANAPLASMOSIS IN EGYPTIAN BUFFALOES

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Received 1-1-1976

SUMMARY

A serological test, the tube agglutination test after Ristic (1962) was adopted to determine the proper incidence of *Anaplasma marginale* infection in 258 clinically normal buffaloes in Egypt. It was proved that 18% were *Anaplasma* carriers.

*Blood films obtained from positive animals stained and examined by the usual techniques, demonstrated a much higher incidence as, 42% of them have got *Anaplasma* bodies or similar structures in their blood.

It is recommended not to use blood film examination any more for survey purposes.

More attention should also be paid to *Anaplasma* infection in buffaloes as a common disease in Egypt.

INTRODUCTION

The diagnosis of anaplasmosis has been for a long time dependent upon the direct detection of the parasite in stained blood films. Several trials were undertaken to make the direct detection of *Anaplasma* bodies easier and quicker. A new rapid stain recommended by Rogers and WALLACE (1966) was suggested. MICHAEL ET AL (1969) discussed the different factors that may affect the quality of the staining technique JAMES ET AL (1970) reported a new modification for field staining for clear evidence of the organisms.

Recent investigators declared that the direct detection of these parasites through the use of the fluorescent technique is considered to be the most reliable and accurate method (RISTIC, 1957-1968), but this method is only applicable during certain stages of infection.

Serological diagnostic methods, on the other hand, have been proposed and evaluated. Some of them are accurate and easy in application (MOHLER ET AL, 1964 and ROGERS ET AL, 1964).

In the present study, trials have been carried out to determine the proper incidence of latent *Anaplasma marginale* infection in buffaloes in Egypt by using a tube agglutination test, the so called Anatest after RISTIC (1962). The obtained results were compared with those from corresponding examinations of blood films, which are still applied as the common diagnostic method for anaplasmosis.

MATERIALS AND METHODS

Serological test, as well as microscopic examination of blood films have been carried out on 258 adult buffaloes which were clinically normal. Half of these animals represented the Nile-Delta region, whereas the other half represented upper Egypt.

Serum samples obtained from each animal were inactivated at 56°C for 30 minutes before being tested by the tube agglutination technique described by Ristic (1962).

Eight blood films obtained from each animal were stained with Giemsa stain (Michael *et al* 1969), and were individually examined; a negative result was considered reliable only when all eight films proved negative to *Anaplasma* bodies.

RESULTS AND DISCUSSION

Results of examination of buffalo-serum and blood films are summarized on the following table, from which it is clear that there was a significant difference between the results by these two tests. There was agreement with the serological technique and microscopical examination of blood films in 174 cases (67, 3%), whereas the two tests disagreed in 84 cases (32.6%).

Serological examination of buffalo-serum for *Anaplasma marginale* infection compared to microscopic examination of their blood.

Total number of buffaloes examined	Number of negative animals by both tests	Number of positives by blood examination and negative serologically	Number of positives serologically and negative by blood film examination	Number of positives by both tests
258	138	72	12	36
Percentage . .	53.4	27.8	4.6	13.8

Microscopic blood examination revealed that 108 out of 258 animals were positive to *Anaplasma marginale* infection with a percentage of 42%, an indication of a very high incidence of *Anaplasma* infection among buffaloes. As these animals were clinically normal, i.e. not suffering from any acute disease with the subsequent uncommon occurrence of parasites in peripheral blood, then this high incidence may be attributed to the fact that during microscopic examination of blood, other endoglobular bodies in the RBCs, as the Howell-Jolly bodies, may be mistaken for *Anaplasma* bodies, and accordingly, the number of positive cases is over-estimated. From these 108 positive cases, only 36 animals (33.3%) proved to be chronically infected with *Anaplasma marginale* through the use of Anatest, whereas the other 72 animals (66.6%) were serologically negative. This far difference between the two tests was the imperative reason for several trials to be worked out to make the direct detection of *Anaplasma* bodies in blood films specific and accurate.

By the use of Anatest, only 48 animals proved to be infected with Anaplasma parasites, revealing a percentage of 18%. When their blood however was microscopically examined, 12 individuals proved to be negative (25%), whereas the other 36 cases were positive to Anaplasma infection (75%). This, indicated, as expected, that some of the chronically infected animals harboured the parasites in their peripheral blood.

Thus, it is evident that the serological test has given a much lower incidence to Anaplasma infection (18%) than did the blood film examination (46%). This significant variation between the two results may be due to the late production of antibodies.

The Anatest coincides with the complement fixation test (Ristic, 1962; Rogers *et al*, 1964) and can only detect the later stages of infection, but with the early stages, it gives unreliable results. Therefore, in order to determine exactly the incidence of Anaplasma carriers, it is greatly advisable to adopt the Anatest or similar serological tests together with simple blood films. Through the use of such serological tests, the chronic stages of the disease could be properly diagnosed.

Finally, it could be concluded that, the proper incidence of the latent form of *Anaplasma marginale* infection among buffaloes in Egypt, as proved by the adoption of the Anatest, is 18% which indicated a rather high incidence. Anaplasmosis in buffaloes should be considered as an important disease in Egypt, especially during the summer time where the animals are exposed to different vaccination systems which act as stress factors. These lead probably to the subsequent flourishing up of the parasites in carrier animals and may explain the appearance of clinical cases after vaccination.

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