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A CONTRIBUTION ON CRYPTOSPORIDIOSIS AS INVESTED, FOR THE FIRST TIME, AT QENA PROVINCE

(With One Table & One Fig.)

By

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دراسة عن الكريبتوسبوريدوز في محافظة قنا

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إستكشفت الإصابة بطفيل الكريبتوسبوريدوز في مجموعة من الصول المتباينة الأعمار
والمختلطة الجنس والتي ظهرت عليها أعراض الإسهال في منطقتين بمحافظة قنا (مدينة قنا
ومدينة نجع حمادي)

SUMMARY

Calves of various ages and sexes have been investigated, for the first time, for Cryptosporidiosis at Qena Province. The parasite has been demonstrated accompanied by the detailed detected clinical diarrhetic cases in the rate of 185 out of 246 only at two localities (Qena & Naga-Hammadi).

INTRODUCTION

Cryptosporidiosis exhibited prominent place among animal parasites. Its causative organism occurred as intestinal sporozoan in tropical and subtropical countries. It exhibited a host specific situation not less than other important parasites as Entamoeba or even Schistosoma organisms (LEVINE, 1973).

According to the wealth of knowledge, complete records concerning Cryptosporidia organisms have not yet been reached. The first description of bovine cryptosporidiosis was in 1971 in an 8-month-old heifer (PANCIERA, et al. 1971) followed by VETTERLING, et al. 1971; BARKER & CARBONELL, 1974 & POHLENZ, et al. 1978 who accepted the organism as occurring extracellular infecting the lower small intestine. All reports appeared contradictory, incomplete and conflicting mostly approaching the clinical side where since its discovery by TYZZER in (1907). Only recently it has been recorded to be associated with diarrhea in calves (BARKER & CARBONELL, 1974; MEUTEN, et al. 1974; SCHMITZ & SMITH, 1975; MORIN, et al. 1976; POWELL, et al. 1976; POHLENZ, et al. 1978; SNODGRASS, et al. 1980; FISCHER, 1982 & AMIRA, 1985).

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In Qena, two natural outbreaks of calves diarrhea occurred, from which Cryptosporidia organisms were the only enteropathogens detected. The outbreaks occurred in two housed milk herds of 150 and 96 freizian sucking calves, born over a period of 5 weeks, in each one of them. Thus, it appeared necessary to enquire for further properties of the parasite as occurring in the freizian calves at Qena Province particularly references on the subject as affecting animals in one of the Upper Egypt localities appeared nearly non-existing.

MATERIAL and METHODS

Materials of this study have been kindly obtained from 246 investigated, 1-35 days old calves, only 185 cases showed with diarrhea at two localities (Qena & Naga Hammidi cities) of Qena Governorate within the period from 15th December to the end of March.

Faecal smears were usually prepared diluted in 1:1 Ringer's solutin while those of watery stools were smeared directly. They were then fixed and stained with Giemsa stain applying the method of POHLENZ, et al. (1978).

RESULTS

The present investigation revealed that Cryptosporidia infection induced a disease occurring among calves aged one week and older of relatively longer incubation period as compared with other reported enteropathogens affecting very young animals (TZIPORI, et al. 1980) Table (1). Indeed, only the diarrhoeic calves of both herds at Qena and Naga-Hammadi cities demonstrated oocysted zygote in the ratio of 93.3 and 47.6% respectively. The mortality rates were 13.3% (Qena) and 12.5% (Naga-Hammadi).

Regular treatment of the infected calves with antimicrobial agents modified the severity of the disease where cases were treated daily with Sulphaguandine, Sulphadimidine, Chloramphenicol and electrolytes.

DISCUSSION

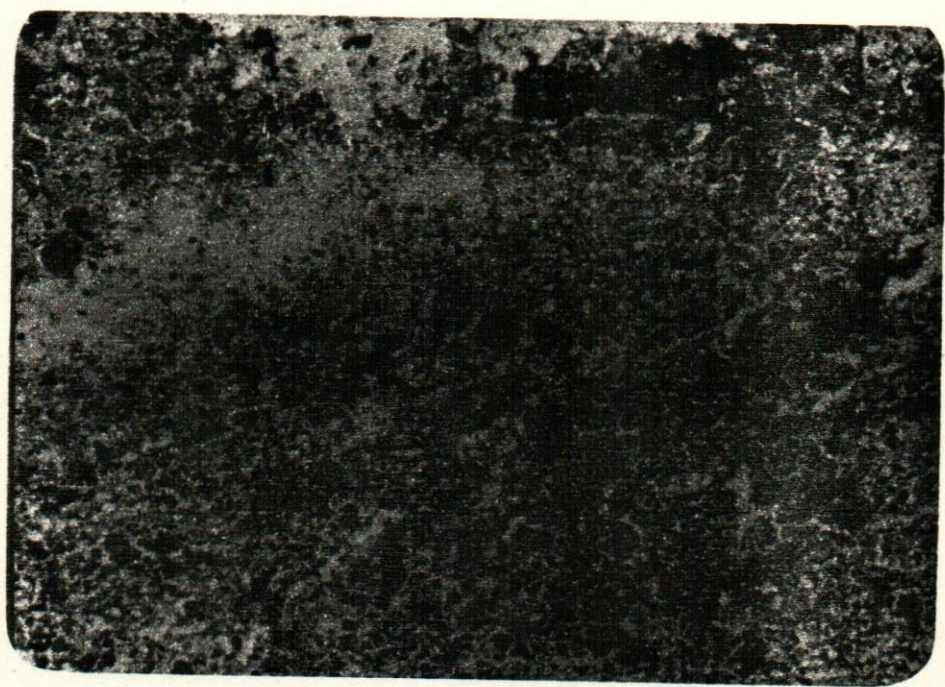
The present results which agreed with those of PANCIERA, et al. 1971 and reports by others (BARKER & CARBONELL, 1974; MEUTEN, et al. 1974; SCHMITZ & SMITH, 1975; MORIN, et al. 1976; POHLENZ, et al. 1978; SNODGRASS, et al. 1980 a; TZIPORI, et al. 1980; FISCHER, 1982 and AMIRA, 1985) were interpreted to indicate that enteric infections with Cryptosporidia were common throughout two herds of Freizian calves at Qena Governorate suffering from severe diarrhea. Comparatively, the diarrhic cases included mortalities contrary to the report of TZIPORI, et al. (1980) mentioned that, in a beef herd of bluegrey sucking calves, Cryptosporidium produced only mild to moderate diarrhea without mortality. In the present authors opinion this might be due to host-specificity, difference of weathers between the U.S.A. and A.R.E. or the dry climate of Qena. The reasons for the high prevalence of Cryptosporidia in the intestine of

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the diarrheal as compared with clinically normal calves appeared unknown. POHLENZ, et al. (1978) have reached the opinion that the Cryptosporidia organisms were probably pathogens causing or contributing to diarrhea. In spite of no essential informations on the epizootiology, pathogenicity and control of bovine cryptosporidiosis have been reached, it was regarded as common enteric pathogens of calves.

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Table (1)
Summary of data collected from two suckler milk herds with cryptosporidiosis

Localities	Herd total number	No. of diarrhoeal animals	No. of positive animals	No. of dead animals	Infectivity %	Mortality %
Gena city	150	140	140	20	93.3	13.3
Naga Hammadi	96	45	45	12	47.6	12.5
Total	246	185	185	32		

Fig. (1)

Cryptosporidium oocysts from fecal smear stained by Giemsa stain X 400 & 1000.

INTRODUCTION