Dept. of Parasitology, Fac. Vet. Med., Cairo University.

SHORT COMMUNICATION:- CRYPTOSPORIDIOSIS IN AFRICAN OSTRICH (STRUTHIO CAMELUS)

(With 1 Photo)

By
H. M. OMAR; NESREN E. MAHMOUD
and M. M. FAHMY
(Received at 29/9/1998)

كريبوسبوريديوزيس في ألنعام الافريقي

حسين محمد عمر ، نسرين عز الدين محمود ، مجدي مصطفي فهمي

لم يلاحظ ايه اعراض على كبار النعام ولكن اثنان من كتاكيتها قد مررت برازا لينا . بفحص عينات البراز من خمسه كتاكيت للنعام واربعه ذكور وثمانيه انات بعد صبغها بالزيل نياسون المعدله وجد عدد اثنان كتكوت وثلاثه اناث مصابه بحويصلات انواع الكريبتوسبوريديم.

Due to their economic importance reviewed by Cain (1997), Ostriches became the most promising animals to keep and invest. Parasitism in Ostriches has been studied as an impairing factor facing ostrich industry particularly in the starter and grower farms (Tully and Shane, 1996).

Protozoan parasites of ostriches and other ratites have been listed and discussed by Craig and Diamond (1996). Coccidian infection with Cryptosporidian species is a cause of disease in chicks suffering from cloacal prolapse (Penrith and Burger, 1993 and Penrith et al., 1994). In Canada, the parasite has been identified by Gajadhar (1993) in 8% of fecal samples obtained from adult birds imported from Botswana.

In the present report, fecal samples were freshly obtained from 5 ostrich chicks, 4 male and 8 female adult ostriches imported from Europe to a private farm in Egypt. Samples were subjected for the routine diagnostic methods for coprological examination (Soulsby, 1982) and fecal smears were stained with modified Ziehl-Nelsen stain (Henriksen and Prohlenz, 1981).

No clinical signs were observed in any of the adult birds. Two chicks passed soft feces. All birds were free of helminth infection. However, the two chicks and 3 adult females were found to harbor cryptosporidial oocysts, which were 3.8-6.0X3.1-5.0 um. and contained 4 sporozoites, Photo (1).

Cryptosporidial enteritis has been repeatedly diagnosed from diarrheic young ostriches in South Africa (Huchzermyer, 1994).

Morphometric characters of the revealed oocysts were within the range given by many authors elsewhere for *Cryptosporidium spp*. Serologically; cryptosporidiosis was confirmed in ostriches by Gajadhar (1994).

The importance of cryptosporidial infection in ostriches due to the bursal invasion and also to infection of the pancreatic ducts (Allwright and Wessels, 1993). Birds with bursal damage are more susceptible than normal to salmonellosis infection (Tizard, 1987). Salmonella species are the most infective agents in young ostriches (Foggin, 1992).

As vaccination programs against Newcastle disease in ostriches start at 2-3 weeks of age (Perelman, 1993 and Medeiros, 1997), special attention to protect young chicks from bursal cryptosporidiosis became urgent particularly in the starter farms.

REFERENCES

- Allwright, D. M. and Wessels, J. (1993): Cryptosporidian species in ostriches. Vet. Rec. 133: 24.
- Cain, C. C. (1997): An overview of the ostrich industry. OstraBoost Pty. Ltd. Riyodh Agric. 97, Saudi Arabia.
- Craig, T. M. and Diamond, P. Lea (1996): Parasites of Ratites. In: Ratites; management, medicine and surgery (Tully and Shane, edits).
- Foggin, C. M. (1992): Pathology of the common diseases of ostriches. Proceedings of the South African Vet. Med. Ass. Biennial National Congress, 144-153.
- Gajadhar, A. A. (1993): Cryptosporidial species in imported ostriches and consideration of the possible implications for birds in Canada. Canadian Vet. J. 34: 115-116.

Assiut Vet. Med. J. Vol. 40, No. 79, October 1998

- Gajadhar, A. A. (1994): Host specificity studies and oocyst description of a cryptosporidial species isolated from ostriches. Parasitol. Res. 80: 316-319.
- Henriksen, S. A. and Pohlenz, J. F. (1981): Staining of cryptosporidia by a modified Ziehl-Neelsen technique. Acta Vet. Scand., 22: 594-596.
- Huchzermyer, F. W. (1994): Ostrich diseases. Rep. of South Africa, Onderstepoort Veterinary Institute.
- Medeiros, C. (1997): Vaccination of ostriches against Newcastle disease. Vet. Rec. February 15, 1997, p. 188.
- Penirth, M. L. and Burger, W. P. (1993): A cryptosporidium species in an ostrich. J. South Afric. Vet. Ass., 64: 60-61.
- Penirth, M. L.; Bezuidenhout, A. J.; Burger, W. P. and Putterill, J. F. (1994): Evidence for cryptosporidial infection as a cause of prolapse of phallus and cloaca in ostrich chicks (Struthio camelus). Onderstepoort J. Vet. Ass. 61: 283-289.
- Perelman, B. (1993): Medical problems observed in ostriches raised under intensive conditions. Proceeding: Ostriches (Ratites) Slagharen, Netherlands, March 1993.
- Soulsby, E. J. L. (1982): Helminths, Arthropods and Protozoa of domesticated animals. Bailliere, Tindall and Cassel Ltd., London, pp. 824.
- Tizard, I. (1987): Veterinary immunology: An introduction. 3rd. ed. W. B. Saunders Company.
- Tully, T. N. and Shane, S. M. (1996): Ratites: Management, Medicine and Surgery. Krieger Publ. Comp. Malabar, Florida, USA.

Assiut Vet. Med. J. Vol. 40, No. 79, October 1998

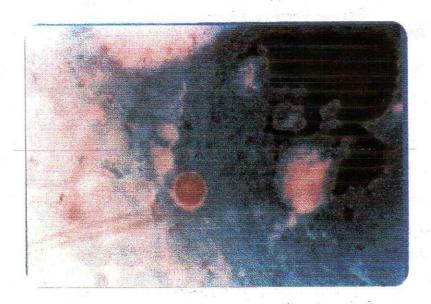


Photo 1: Cryptosporidium species oocyst.