

CRYPTOSPORIDIUM INFECTION IN SNAKES

K. LAWRENCE, B.V.Sc., M.R.C.V.S.

30 Beanhill Road, Ducklington, Witney, Oxon OX8 7XX

Cryptosporidium (Family Cryptosporidiidae) is an obligate intracellular protozoan parasite which completes its life cycle in the lining of the bowel in vertebrates (Levine, 1973).

The life-cycle is usually direct, with infected reptiles shedding oocysts which further develop into infective sporozoites in the environment. The cycle is completed by the ingestion of the infective sporozoite by the reptile. The disease is of little significance in wild reptiles, but infection can rapidly build up in vivaria to pathogenic levels in the event of insanitary conditions. *Cryptosporidium sp.* infection has been recorded in many vertebrates and it has been shown to have little host specificity and must therefore be considered a potential zoonoses.

Brownstein et al (1977) reported *Cryptosporidium sp.* as a cause of chronic hypertrophic gastritis in snakes. The course of the disease was chronic, with the recorded symptoms including weight loss, regurgitation and the presence of a firm midbody swelling. In the one confirmed case I have treated, a Black Rat Snake (*Elaphe obsoleta obsoleta*), treatment proved ineffective and the vivarium proved difficult to disinfect. The snake passed large numbers of oocysts in the faeces, for a period of three months until its death. *Post mortem* examination revealed a haemorrhagic gastritis, with the lumen of the stomach much reduced because of thickening of the stomach wall. Many oocysts were seen on impression smears of cut sections of the stomach wall and no significant bacteria were cultured.

Marcus (1981) advises that coccidia should be considered in any investigation of enteritis in reptiles, although Keymer (1981) considers *Cryptosporidium sp.* infections in reptiles to be rare.

Campbell et al (1982) have tested a number of recommended disinfectants against *Cryptosporidium* oocysts obtained from infected calves. Only ammonia and formaldehyde completely destroyed the oocysts and they must be considered the disinfectants of choice in the event of a confirmed *Cryptosporidium* infection. Likewise they should be used as the disinfectants of choice for any coccidial infection. Both ammonia and formaldehyde are potentially toxic and must be used in accordance with manufacturers instructions in a well ventilated room or preferably out of doors. The vivarium once disinfected must be repeatedly rinsed with plain water before any reptiles are re-housed.

REFERENCES

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