COYPUS (MYOCASTOR COYPUS) AS A NEW HOST OF CRYPTOSPORIDIUM PARVUM (APICOMPLEXA: CRYPTOSPORIDIIDAE)

The protozoan infections caused by the coccidia of the genus Cryptosporidium are widely distributed in various host species both in domestic and free-living animals. Improvement of diagnostic methods enables to detect Cryptosporidium spp. in wide spectrum of new hosts.

This note is aimed at the information of the first finding ever of C. parvum in Myocastor coypus in two farms in the vicinity of Poznań (Poland).

At farm no. 1 a total of 37 coypus, 14—28 days old, were examined in August 1989. The animals were kept in free-ranges, in boxes with concrete bottom and covered with shed. The breeder placed 200—250 coypus there. Samples or feces were taken either using glass rectal tubes of the youngs were kept in a box till defecation. Feces were examined by the flotation-centrifugation method according to Breza (1987: Helminthologia 1: 57—63) or in native preparation mixing sample of feces with physiological saline. In one litter, eight 14-day-old youngs, no oocysts of cryptosporidia were found. In another litter C. parvum was detected in five out of eight examined youngs (62.5%) 14—21 days old.

At farm no. 2 coypus were placed in cages approx. 60 cm above the concrete floor to which the feaces fall through openings of wire-netting. Using the above mentioned methods oocysts of C. parvum were proved in each of twenty 28-day-old youngs. Hundred-per-cent infection by this protozoan was observed in the same number of examined animals 35 days old; findings in 51-day-old coypus were negative.

In all examined coypus at both farms no diarrhoea was recorded and feces were mostly of normal consistency, well formed and typical for this species.

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In fresh preparations prepared by mixing of positive fecal samples with physiological saline, 50 oocysts of cryptosporidia were measured. Oocysts were mostly spherical, contained 4 apparently formed sporozoites with residual body. Measurements of oocysts were 4.8—5.2 × 4.5—4.8 μm (average 5.0 by 4.75 μm in diameter).

Using the cultured oocysts from feces of spontaneously infected 28-day-old young coypus, two 4-day-old laboratory mice of one litter were infected with a dose of 10⁴ oocysts and six of the same litter served as control. In both the first cryptosporidial oocysts appeared 5 and 7 days post infection and they were excreted in a relatively low intensity during 10 days. The control mice were negative all the time. Infection was not successfully transferred to two 7-day-old chicken, in which during 30 days no occurrence of oocysts of this protozoan was proved.

In another experiment five 10-day-old young coypus were infected perorally with a dose of 5 × 10⁴ C. parvum oocysts isolated from lambs and 5 days post infection the first oocysts of the protozoan were found in their feces. Result of examination of control animals was negative.

On the basis of oocyst morphology and successful transfer of the isolate from the coypus to laboratory mice as well as transfer of C. parvum infection from lambs to young coypus it is evident that Myocastor coypus is parasitized with the species C. parvum. Hitherto results indicate that this protozoan occurs in 14—35 day—old coypus. Because of constantly developing breeding of coypus in farms it will be necessary to determine C. parvum influence on morbidity or mortality and quality of rearing of this fur animal.

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