COTYLOPHORON TRAVASSOSI SP. N. (TREMATODA – PARAMPHISTOMIDAE)
FROM CATTLE

HÉLIO MARTINS DE ARAÚJO COSTA & MARCOS PEZZI GUIMARÃES

Departamento de Parasitologia, Instituto de Ciências Biológicas, Universidade Federal de Minas Gerais, Caixa Postal 2486, 31270-901 Belo Horizonte, Minas Gerais, Brasil

A new species of the genus Cotylophoron (Trematoda – Paramphistomidae) – Cotylophoron travassosi sp. n. – is described. The measurements of the worm and its structures are compared with the valid known species.

Key words: Cotylophoron travassosi – Trematoda – Paramphistomidae

The procedures for the systematic knowledge of the complex Paramphistomidae group were studied among others by Stiles & Goldberger (1910), Fukui (1929), Maplespoon (1923), Nasmark (1937) and Van Strydonk (1970). More recently Eduardo (1982a, b and c; 1983; 1984; 1985) published a revision of those methods and taxonomy of the group.


MATERIALS AND METHODS

The worms were washed in physiological solution (0.8%) and preserved in Railliet and Henrt solution.

Lateral and dorso-ventral sections were used for studying the worms. Worms laying on ventral and on lateral sides were used for making these cuttings. Chlorid carmin was used for staining the worms sections.

The measurements are given in millimeters.

Some specimens were fixed with 10% buffered (pH 7.0) formalin and dehydrated through a series of ethanol and dried in a critical point drying apparatus using liquid carbon dioxide. Dried specimens were mounted on metal stubs, sputtercoated with gold and then viewed and photographed with a scanning electron microscope (SEM).

RESULTS

Cotylophoron travassosi sp. n. (Figs 1-8)

Body smooth of conical shape slightly curved over its ventral side, 5.4 (4.6-6.0) long by 3.0 (2.8-3.4) wide at the acetabulum level (Fig. 1). Paramphistomum type (sensu Nasmark) pharynx (Fig. 3) without median muscular layer and without labial and posterior sphincter, measuring 0.8 (0.7-0.9) in length and 0.7 (0.5-0.8) in width. Esophagus with bulb (Fig. 3), 0.5 long, 0.2 wide anteriorly and 0.3 posteriorly. Twisted cecus reaching the lateral edge of the acetabulum. Acetabulum Cotylophoron type (Fig. 1) 1.4 (1.0-1.5) long and 1.9 (1.8-2.0) wide, with 23 to 25 units in the median circular external layer (MEC), 19 to 20 units in the dorsal circular external layer (DEC), 44 to 48 units in the dorsal circular internal layer (DIC), 14 to 16 units in the ventral circular external layer (VEC) and 54 to 56 cells in the ventral circular internal layer (VIC) (Fig. 4). The relation between the length of the acetabulum and the body is 1:2.9 (1:2.5 to 1:3.2). Cotylophoron type genital sucker situ-
ated near the bifurcation of cecum (Fig. 2) with 0.7 to 0.9 in diameter with long genital papillae and no sphincter and with the male and female organs joining and finishing in a single genital pore (Fig. 5). Ovary just above the acetabulum, (Figs 1 and 2) measuring 0.8 to 1.0 by 0.6 to 1.0. Ootype measuring 0.4 to 0.8 by 0.4 by 0.6. Uterus with ascendent loops. Laurer's canal crossing the excretory vesicle. Vitellaria in lateral fields, extending from level of pharynx to lateral border of acetabulum, not confluent posteriorly. Operculated eggs measuring 0.132 to 0.134 long by 0.078 to 0.081 wide. Lobated testicles slightly diagonal (Fig. 2) with same shape and size, 0.4 to 0.8 long by 0.7 to 1.6 wide. Efferent canals driving anteriorly with no cirrus pouch.

These characteristics and measurements were taken from dorso ventral cuttings with the worm laying on a lateral side and from longitudinal cuttings with the worm laying on its ventral side.

The scanning electron microscopy showed irregularly round papillae (Figs 7 and 8) dis-
played in circular layers around the oral opening (Fig. 6). There were no papillae in the acetabulum and genital sucker.

Type host: Bos indicus

Site of infection: rumen and reticulum

Locality: state of Maranhão – Brazil

Specimens deposited: Department of Parasitology ICB UFMG Helm. Coll. no. 229.

The name C. travassosi sp. n. was given as a tribute to the Brazilian parasitologist Lauro Travassos.

DISCUSSION

Cotylophron travassosi is different from the species described by Eduardo (1985): C. xiangjiangense has a pharynx Liorchis type and testes in tandem; C. macrophinctris has sphincters in the genital sucker and testes in tandem; C. cotylophorum has papillae in the genital opening and acetabulum, testes bigger than ovary and in tandem; C. barelliensi has testes in tandem, smaller than ovary; C. fubedi and C. jacksoni have lobbed testes bigger than ovary. It is also different from C. panamensis described by Price & McIntosh (1953) because its testes are not juxtaposed and its vitellaria not confluent; genital sucker, acetabulum and pharynx are bigger; in C. panamensis testes are larger and ovary is twice smaller than in C. travassosi.

REFERENCES


