A STUDY ON THE MORPHOLOGY OF EARLY LARVAL STAGES OF TOXOCARA CATTI (SCHRANK, 1788)


However, Araujo (Rev. Inst. Med. trop. Sao Paulo 14: 83–90, 1952) demonstrated in an experimental work that there are two well discernible cuticular sheaths on the body surface of Toxocara cati larva (as well as of Ascaris lumbricoides and A. suum larva) artificially released from eggs at +25°C on days 15–22 of maturation. This indicates that the larva underwent two developmental stages in the mature egg. The author documented these observations by photomicrographs of larvae with sheaths especially well visible at both ends of body.

We have performed a similar experiment with the larvae of Toxocara cati (Schranks, 1788). The eggs were released from uteri of mature females of T. cati obtained at the dissection of cats. They matured in the medium of 0.1 N H2SO4 at +30°C. On day 15 of maturation the eggs were repeatedly washed with water and fresh microscope preparations in distilled water were prepared from several tens of eggs. The larvae were then gently pressed out on a cover glass while being observed in the microscope at the magnification of 100x.

Immediately after the release only one cuticular sheath was well visible at the body ends of all larvae at the magnification of 400x. Within about 30 min, however, the second, outer cuticle started to separate. Both cuticular sheets seems to be tightly connected inside the egg and they separate from one another only after the release of the larva from the egg shell. The outer, markedly thinner cuticular sheath envelopes the 1st-stage larva and theinner, thicker sheath protects the larva of the 2nd stage (Figs. 1, 2).

Similarly as Araujo (1972), we have observed only one cuticular sheath in some larvae; it is possible to support his hypothesis that the fine outer of the 1st-stage larva seems to be more fragile and remains inside the egg shell after the larva has been pressed out.

Araujo's observations are valid also for the larvae of T. cati; two cedases occur still inside the egg and, consequently, there are five larval stages and not four as it has been assumed previously. Both stages are formed in the eggs already from day 15 of maturation.

It can be concluded that the infective larvae of T. cati and T. cati causing the disease called larval toxocariosis are the larvae of the 3rd developmental stage.

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