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EXCYSTATION OF SCOLECES OF CESTODES OF THE FAMILY HYMENOLEPIDIDAE FROM THE CYSTS IN VITRO

A method of releasing scoleces from the cysts was used for detailed studies on the morphology of cestode cysticercoids belonging to the family Hymenolepididae Fuhrmann, 1907: *Dicranotaenia coronula* (Dujardin, 1845), *Diorchis inflata* (Rudophi, 1819), *D. nyrocae* Yamaguti, 1935, *Fimbriaria fasciolaris* (Pallas, 1781), *Microsomacanthus compressa* (Linton, 1782), *M. paracompressa* (Czapliński, 1956), *M. paramicrosoma* (Gasowska, 1931), *Sobolevianthus gracilis* (Zeder, 1803) and *S. octacantha* (Krabbe, 1869) whose larval stages develop in planktonic crustaceans of the classes Copepoda and Ostracoda.

Gastric juices of a duck (*Anas platyrhynchos domestica* Linné) starving for 12 hours and a 0.1 % solution of synthetic trypsin by Hoffman (Trans. Am. Fisheries Soc. 88: 96—99, 1959) were used for excystation. All experiments were conducted at the temperature of 39 °C. At first, isolated cysticercoids were exposed to fresh, undiluted gastric juices, and after 50—60 minutes they were transferred to the solution of trypsin. In the course of 10—15 minutes ruptures occurred at sites of invagination; and at first the scolex, later the neck appeared separated or occasionally connected with the cyst by a narrow strip of tissue.

At this instant, the solution of trypsin had to be diluted by distilled water (1 : 1) lest partial digestion of the scolex should occur.

A converse method, i.e. an application of a 0.1 % solution of trypsin followed by that of gastric juices of a duck as used by Ždářská (Čs. parazitol. (Praha) 11: 343—345, 1964) in excystation of the metacercariae of echinostomous trematodes was not effective. Diluted gastric juices as well as lower concentrations of synthetic trypsin were also without effect. Some experiments have been carried out with slightly injured bodies of crustaceans infected with cysticercoids. In these cases, exposition of the cysticercoids to gastric juices had to be prolonged to 80—90 minutes. Other methodical procedures which were used in excystation of scoleces of different cestode species by Rothman (Exp. Parasitol. 8: 336—364, 1959), Sawada (Exp. Parasitol. 8: 325—335, 1959) and Smyth (Commonwealth Bureau Helminthol. 34: 3—38, 1963) gave no positive results in our experiments.

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