

## MORPHOLOGY AND HISTOCHEMISTRY OF THE METACERCARIA OF EURYTREMA PANCREATICUM

Metacercariae of *E. pancreaticum* were recovered from the abdomen of *Conocephalus fuscus* (Orthoptera) collected in pasturelands in the vicinity of Alma-Ata (Kazakh S.S.R.).

The wall of the metacercaria consists of three layers, a thin outer and a thin inner limiting layer and a thick middle layer. The body of the metacercaria is several times larger than the body of the cercaria (Ksembaeva G. Kh., Dissertation Paper, Academy of Sciences of the Kazakh S.S.R., Institute of Zoology, Alma-Ata, 1968) and differs morphologically from that of the cercaria in the absence of stylet, proper cystogenic gland cells and tail. The penetration gland cells localized on the dorsal side of body in the region between the pharynx and ventral sucker, as well as their ducts opening into the stylet pocket, are more distinctly developed than in the cercaria (Žárská Z., Folia parasit. (Praha) 26: 259—263, 1979). The structure of the wall of the excretory bladder of metacercaria is identical with that of cercaria. Striking changes occur in the structure of the tegument of metacercaria. The subtegumental cell, their processes and tegument on the whole body surface are well developed.

Histochemical studies revealed that the middle layer of the cyst wall contains neutral mucosubstances and proteins with tyrosine and SS groups, whereas the inner and outer limiting

layer contain acid mucosubstances and proteins with tyrosine and SS groups. The inner limiting layer contains acid mucosubstances with sulphogroups (the method with Alcian blue is negative after demethylation), the outer limiting layer contains acid mucosubstances with carboxyl groups (the method with Alcian blue is positive after demethylation). The secretion in the well developed subtegumental cells, in their processes and in the tegument contains acid mucosubstances with sulphogroups. Histochemical properties of the contents of penetration gland cells and their processes are identical both in cercaria and metacercaria. The secretion is composed mainly of proteins with tyrosine and tryptophane and neutral mucosubstances. Also the histochemistry of the excretory bladder cells is the same in the metacercaria and in the cercaria; they contain proteins with tyrosine, tryptophane and SH groups and hydrophylic lipids. Glycogen was detected in the body parenchyma and suckers of the metacercaria.

The structure of the metacercarial tegument is identical with the structure of adult trematodes in its morphology and histochemistry. The role of penetration gland cells in the metacercaria, which are more developed than those in the cercaria, remains uncleared.

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