Information

CHARACTERISTICS OF HEPATIC MAST CELLS IN RATS INFECTED WITH *TAENIA TAENIAEFORMIS*

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Staining property, kinetics and degranulation of the hepatic mast cells (HMC) in the liver around the metacestodes of *Taenia taeniaeformis* in rats were studied.

Two different types of HMC, designated as Type I and Type II, could be distinguished. Type I resembles mucosal mast cells in that the cells were stained blue with Alcian blue-Safranin O at 0.2M $MgCl_2$ but could not be stained when the concentration of $MgCl_2$ was raised to 0.6M by the critical electrolyte concentration (CEC) method. Moreover, they could neither be stained with 0.5% Toluidine blue at pH 0.3, nor degranulate *in vivo* after treatment of the rat with compound 48/80. Type II HMC showed an intermediate staining profile whichyis between that of the connective tissue mast cells and the mucosal mast cells. These cells stained dark blue with Alcian blue-Safranin O and could still be stained when the $MgCl_2$ concentration was raised to 1.4M by the CEC method. Type II cells could be stained with 0.5% Toluidine blue at pH 0.3, and degranulated *in vivo* after treatment with compound 48/80. These two types of HMC were degranulated by the injection of phosphate-buffered extract of strobilocerci of *T. taeniaeformis* into the infected rats.

The kinetics of HMC in the *T. taeniaeformis*-infected rats was also investigated. HMC, mostly Type I, were observed from day 14 postinfection (PI) onward, increasing remarkably up to day 28 PI and then gradually declined. The Type II HMC were seen only from day 28 PI, and their ratio to Type I cells increased gradually. On day 70 PI, the ratio of Type II to Type I was about 1 to 1, and the former contained cells which had the same staining profile as the connective tissue mast cells.

From the above results, it is suggested that there exist transitional stages and/or different types of mast cell populations in the liver of rats infected with *T. taeniaeformis*.