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ACQUIRED IMMUNITY AGAINST *TAENIA CRASSICEPS*  
IN GOLDEN HAMSTERS USED AS ALTERNATIVE DEFINITIVE HOSTS

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The definitive hosts of *Taenia crassiceps* are carnivores, i.e., mainly dogs and foxes. Recently, however, it was revealed that the worm can develop into the adult form in the small intestine of the golden hamster. In the present study using the model of golden hamsters, an acquired immunity against adult *T. crassiceps* was examined. Golden hamsters were divided into three groups, these were Group I: control group with challenge infection, Group II: those injected intraperitoneally with 10 evaginated cysticerci at day 28 before challenge infection and Group III: those orally administered with 30 cysticerci at day 21 and day 28 before challenge infection. To remove any parasites remaining in their intestines, all groups were treated with praziquantel at 10 and 12 days before challenge infections. For the challenge infection, 50 cysticerci were administered orally. In Group I, the mean numbers of worms recovered from the intestine were 35.0, 16.8, 6.6 and 0.3 on days 1, 10, 20 and 30 after infection, respectively. No significant differences in the number of worms recovered among the 3 groups were observed. However, on days 10 and 20 after challenge infection, worm recovery from Group III (23.4 and 8.3, respectively) was significantly less than that of Group II (12.8 and 2.5, respectively). Antibodies (IgG ELISA) to the excretory and secretory antigens derived from scoleces were detected after 10 days of challenge infection in Group I, and 1 day before challenge infection and thereafter in Groups II and III. In all groups, antibody titres increased gradually along their courses of challenge infections. An increased number of mucosal mast cells was observed in the small intestines of golden hamsters in Group I at 10 days after challenge infection and thereafter. The numbers of mucosal mast cells in Groups II and III increased by three times compared to those in Group I from 1 day before challenge infection. In all groups, the numbers of goblet cells in the small intestines increased as early as 5 days after challenge infections.