Abstract

Mesocestoides corti and *Taenia crassiceps* are tapeworms, larvae of which are characterized by their ability to reproduce asexually. In this work, the effect of infection by *M. corti* and *T. crassiceps* in BALB/c, C57BL/6J and ICR mice on the growth and metastasis of B16F10 melanoma tumors was investigated. Although an increase in metastatic activities was observed after intravenous administration of melanoma cells to *M. corti*-infected mice, both tapeworms showed a strong suppressive effect on the size and number of tumors and metastases formed when the cells were administered intraperitoneally. This, in some cases, led to a complete elimination of tumor cells. *In vitro* cultivation of B16F10 cells in the presence of larval excretory-secretory products led to a decrease in their viability but an increase in their migration ability. Flow cytometry proved that *M. corti* infection has an effect on the increased number and proportion of macrophage populations in the peritoneum of ICR mice. Our work confirmed the anti-tumor effect of *T. crassiceps* infection in mice and introduced *M. corti* as a new helminth species capable of influencing cancer.

Key words: helminths, cestodes, cancers, *Mesocestoides corti*, *Taenia crassiceps*