ABSTRACT


Sheathed infective third-stage larvae of Ancylostoma caninum and Ancylostoma tubaeforme were successfully cryopreserved in liquid nitrogen. The survival rates, as assessed by motility, were A. caninum 49,2% and A. tubaeforme 51,5% after 30 d of cryopreservation.

Keywords: Ancylostoma caninum, Ancylostoma tubaeforme, cryopreservation, sheathed third-stage larvae

Recently Titoy (1995), using a high concentration of cryoprotectant mixture that was added in two steps, successfully cryopreserved sheathed third-stage larvae of G. pachyscelis. The present study describes the application of the same technique to A. caninum and A. tubaeforme larvae.

After 30 d, larvae were thawed and examined for motility. Judged by this criterium, the survival rates were 49,2% for A. caninum and 51,5% for A. tubaeforme.

Two 3-month-old male crossbreed dogs and two 4-month-old male cats were used for the trial. One of each species was infected subcutaneously, and the other animals per os, with 150 motile cryopreserved third-stage larvae per kg.

Faecal worm egg counts were positive for all the animals on day 15 after infection. The average number of worms recovered at necropsy, on day 18 after infection, was 8,9% for A. caninum and 11,3% for A. tubaeforme.

This study has demonstrated for first time that sheathed third-stage larvae of A. caninum and A. tubaeforme can be cryopreserved in liquid nitrogen and that they retain their infectivity after thawing.

REFERENCES