

Vaccination trials against Taiwan Taenia eggs in pigs injected with frozen oncospheres of Taiwan Taenia, Korea Taenia, T

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摘要

Abstract

In this study, 12 Small-Ear-Miniature pigs aged 142 to 185 days were used to determine whether pigs injected with nonviable oncospheres of *Taenia solium* or *Taenia saginata asiatica* can become resistant to the challenge of viable eggs of *T. solium*. The 12 pigs were equally divided into 4 groups: 3 experimental groups in which each pig was injected subcutaneously with a mixture of 0.2 mL complete Freund's adjuvant and 10(4)/0.2 mL nonviable Taiwan/Asian *Taenia*, Indonesia *Taenia*, or *T. solium* oncospheres, and 1 control group in which each pig was injected subcutaneously with 0.2 mL phosphate buffer solution and 0.2 mL complete Freund's adjuvant. Each pig was orally inoculated with 10000 viable *T. solium* eggs 1 month later. The infection rates were 100% (2/2), 100% (3/3), 33% (1/3), and 100% (3/3) and cysticerci recovery rates were 1.3% (254/20000), 1.2% (371/30000), 0.01% (4/30000), and 8.6% (2,577/30000), respectively. Except for the location of 72 cysticerci located in the viscera, 3134 cysticerci were recovered from the muscles. In the experimental groups, 4 cysticerci recovered were viable and the remaining 625 were either calcified or degenerated. However, 2567 cysticerci recovered from the control group remained viable and only 10 were calcified or degenerated. The results indicate that in addition to the vaccine of *T. solium*, those of Taiwan *Taenia* and Indonesia *Taenia* can also induce high-crossing immunologic reactions against *T. solium* infection.