

Reviewer comments

It is dangerous experiment as the authors mentioned on page 21-22. "an improved protocol without feeding high risk eggs orally into the gut, but instead injecting protoscolices via the portal vein, reduces the occurrence of laboratory-acquired infection in the laboratory and is safe for animal care personnel. " This sentence should have the more explanation. Why injecting portal vein is safer? It looks technically demanding to the ordinary readers. Are there any records on lab-acquired infection in this field. Explain examples on the risks when the other methods are taken

Author reply

Yes, for experimental animals, it is true that the portal vein injection is an open surgery, it is much more dangerous than the oral feeding. But for this particular study, we are concerned about the danger towards the human researchers who handle the parasite eggs. We must consider the parasite life cycle. The parasite's eggs infect humans by the gastro-intestinal route. While in this improved animal model, the protoscolices were used. Protoscolices are not parasite eggs, they have no harm to humans. When injected in the portal vein of the experimental animal, they can form the same parasite cyst in the liver as the eggs do from the GI route. Even if people swallow protoscolices they won't get parasite infection because protoscolices are not contagious parasite eggs.

To address this for the general readers, we add a paragraph

Cystic echinococcosis is considered as an occupational infection. Certain people, e.g. shepherds, slaughterers, stockbreeders, farmers, et al, are at higher risk of the disease because their career makes them to work closely with animals. When producing a disease model, the researchers are exposed to the risk due to oral feeding of parasite eggs to animals.