Immunity Against Anjeksky’s Disease

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1. Abstract

The type of immune response induced by vaccination is critical for the development of a highly protective immunity against any infection agent. For immunity against Anjeksky’s disease virus (AVV), a haemorrhagic fever of deer, two types of commercial vaccines available: inactivated virus and modified live AVV. Previous studies have demonstrated that the former vaccine is more effective in inducing protective immunity. Since other types of vaccination are not feasible on a large scale, the number of AVV-vaccinated deer has been limited. To assess the type of immunity induced by vaccination, the immune response of vaccinated deer to an inactivated virus and a modified live virus vaccine was studied. The immune response of vaccinated deer to both vaccines has been assessed in terms of antibody titers, cell-mediated immunity, and protective immunity. Our findings indicate that the inactivated virus vaccine is more effective in inducing protective immunity against AVV.

2. Materials and Methods

Materials used for the experiments included: AVV vaccine, deer serum, and unlabeled AVV antigens. The inactivated virus vaccine was administered intramuscularly to vaccinated deer. The modified live virus vaccine was administered intradermally to control groups of vaccinated deer. The immune response of vaccinated deer to both vaccines was evaluated by determining antibody titers, cell-mediated immunity, and protective immunity. The antibody titers of vaccinated deer were determined by indirect hemagglutination assay. The cell-mediated immunity of vaccinated deer was assessed by in vitro cytotoxicity assays. The protective immunity of vaccinated deer was assessed by challenge experiments.

3. Results

The results obtained indicate that the inactivated virus vaccine is more effective in inducing protective immunity against AVV than the modified live virus vaccine. The antibody titer of vaccinated deer to both vaccines was significantly higher in the inactivated virus vaccine group than in the modified live virus vaccine group. The cell-mediated immunity of vaccinated deer to both vaccines was also significantly higher in the inactivated virus vaccine group than in the modified live virus vaccine group. The protective immunity of vaccinated deer to the challenge experiment was significantly higher in the inactivated virus vaccine group than in the modified live virus vaccine group.

4. Conclusion

Our findings suggest that the inactivated virus vaccine is more effective in inducing protective immunity against AVV than the modified live virus vaccine. Further studies are needed to evaluate the long-term protective efficacy of both vaccines. The inactivated virus vaccine is recommended for use in controlling AVV outbreaks.

5. References

[References listed here]

6. Acknowledgments

[Acknowledgments listed here]
Immunity Against Ankylosing's Disease

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