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| Immunization of pregnant cows and guinea pigs with aromatic dependent *Salmonella* | Thesis Title  |
| 2000 | Year |
|  The efficacy of production two vaccines against Salmonellosis from aromatic strains,(aromatic dependent *Salmonella typhimurium* SL1479 and aromatic dependent *Salmonella dublin* SL1438)to induce specific immunity in pregnant guinea pigs and pregnant cows was evaluated . the passive transfer of specific immunity to their newborns was also studied. Potency, safety and sterility tests were done to determine the efficacy of prepared vaccine. The vaccines were used for immunization of different groups of pregnant guinea pigs, the first group was vaccinated twice with 1 ml containing (107 colony forming unit ) approximately forth and second week preparturation and the second group (control) was injected with 1ml of trypticase soy broth (TSB)in the same manner. Adverse reaction to vaccination were not observed in the vaccinated group, which parturated normally, the vaccines induce humoral and cellular immunity in the dams. Transfer of this immunity to the newborns was accomplished which revealed high titers of somatic and flagellar antibody and gave positive delayed type hypersensitivity –skin test. the newborns of vaccinated guinea pigs overcome challenge with virulent Salmonella typhimurium and checked in three separate groups at 3,6 and 8 weeks of age respectively compared with the three control groups at the same age. Mortality rate in control groupswas much higher and all animals died within (3-10) days post challenge in comparison with the immunized groups. To study the efficacy of transfer factor in recipient animals, specific transfer factor extracted from spleens of different groups of vaccinated and control guina pigs. Oneml equivalent to (5x106)cell were injected intramuscularly three times/two days intervals. Cell mediated immunity in recipient animals was evaluated by delayed type hypersensitivity reaction And macrophage migration inhibition test. Recipient animals overcome challenge with virulent *Salmonella typhimurium.* Similaraly transfer factor from spleens of newborns of immunized and control dams was extracted and evaluated. Twelve pregnant cows were divided into two groups,the first group (8 cows) Were vaccinated with prepared vaccine( aromatic dependent Salmonella typhimurium SL1479)at six and three weeks before suspected parturition at a dose of (2ml) containing (6x109 CFU),the second group (4 cows )was kept as control. Cows were examined for clinical signs, humoral and cellular immunity before and after vaccination there was no adverse reaction or abortion in vaccinated cows. In the dams the vaccine induce humoral immune response which showed increased antibody titers gradually and reached the maximum titers after the second dose of vaccine and induce cellular immunity .the results suggest the transfer of immunity to the newborn calves from vaccinated dams only . which they revealed high titers of O and H antibody in the first week of age and exhibited positive delayed type hypersensitivity /skin test.   |  Abstract  |