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SUMMARY

Comparative studies between different serological tests on different animal species (sheep, goats, cattle, and camel) vaccinated by two doses initial and booster dose after 30 days with inactivated vaccine were done to determine the most efficient employed serological test for evaluation of sera for diagnostic purposes and for determination of the humeral immuno-response of different animal species.

These studies concluded :

First, RVF virus ZH501 was titrated in tissue culture and mice, the titre was 7.5 and 7 log 10/ml respectively from which the serological test performed and three antigens were prepared, The serological test used for determination of RVF antibodies were .

1. AGPT which give poor results in all animal species were (7 % in sheep, 5.8% in goats, 5.9 %. In cattle and 11 % in camels.
2. SPA agglutination test gave positive reaction more than AGPT, it was (42% in sheep , 36.6 % in goats, 41.9 % in cattle and 43% in camels) and gave the highest percentage of reaction at 120 days post vaccination in all animal species.
3. HI test gave positive result more than SPA but less than ELISA which was (52% sheep , 48.3 % in goats , 48.8 in cattle and 52 % in camels) .
4. ELISA test appear more sensitive than HI and gave (60 % in sheep, 57.5 % in goats, 58.3 % in cattle and 61 % in camel).

5. SNT gave positive reaction in parallel correlation with ELISA (which was 64% in sheep, 60.8 % in goats , 61.9 % in cattle and 64% in camels) .

Trials for production of diagnostic kits for RVF virus including highly sensitive and specific antigen for detection of RVF antibodies in domestic animals. This study concluded that three types of RVF antigen were prepared as follows:

* RVF tissue culture ultra filtration concentrated antigen.
* RVF tissue culture ultra centrifugation concentrated antigen
* RVF tissue culture poly ethylene Glycole (PEG) concentrated antigen.

All prepared antigen were sterile, safe when inoculated in both tissue culture and mice. The ideal dilution for the prepared antigen using checkerboard ELISA revealed that the ultra filtration concentrated antigen was the highest titre (1: 400) with diluted serum (1: 50) while ultra centrifugation concentrated antigen titre was (1: 400) with diluted serum (1: 25) and (PEG) antigen titre was (1: 200) with (1: 25) serum titre. All prepared antigen gave positive reaction in AGPT with reference antiserum. Evaluation of the three prepared antigens using vaccinated sheep sera sample was determined by indirect ELISA technique, Ultra filtration concentrated antigen gave higher positive percentage than ultra centrifugation and PEG antigens which was (97.5 %) .