

VIROLOGICAL AND SEROLOGICAL RESULTS FROM NATURAL AND EXPERIMENTAL  
309 INFECTIONS BY CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS IN WEST AFRICA.

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We studied a fatal human case of Crimean-Congo Hemorrhagic Fever (CCHF) from southern Mauritania in 1988. Two other mild infections were also followed. CCHF infection was confirmed by virus isolation in each case. Antibody titers (ELISA) appeared to correlate inversely with severity of disease. The early development of IgM and IgG antibodies was documented. A survey of 1,283 sheep in Mauritania following the human case demonstrated an overall IgM antibody prevalence of 4.1%, with 17.7% IgG positive.

Experimental infection of sheep, laboratory rabbits, and chickens was undertaken to study the duration of detectable antibodies, and of CCHF virus infectivity to ticks. All species seroconverted, and virus was reisolated. Other West African vertebrates that are suspected in the natural cycle of CCHF were tested for their susceptibility to infection. *Mastomys* and *Arvicanthis*, two peri-domestic rodents were inoculated, as were guinea fowl and hedgehogs. No clinical symptoms were detected in any of these species; serological responses differed among the hosts, and virus was not reisolated. Attempts to infect *Hyalomma* and *Amblyomma* ticks feeding on certain of these animals were variable. We are systematically experimenting with indigenous vertebrate and tick species in order to define the potential reservoirs and vectors of semi-arid West Africa.

22 AVR. 1992

ORSTOM Fonds Doc

N° : 35.209

Cote : B

Milson