CCHF VIRUS ISOLATION IN TICKS (HYALOMMA) FROM ANIMAL HOSTS

Hyalomma species	No	Frequency of CCHF virus (isolations/pools)	
Camel (*Camelus dromedarius*)			
H marginatum rufipes	716	5/43 (12%)	(6%)
H dromedarii	620	0/40	
H impeltatum	11	0/1	
H truncatum	44	0/5	
Cattle			
H marginatum rufipes	981	6/65 (9%)	(8%)
H impeltatum	44	0/4	
H truncatum	55	0/5	
H dromedarii	18	0/2	
Sheep			
H truncatum	16	1/2	
H marginatum rufipes	11	0/1	
Goat			
H marginatum rufipes	10	0/1	
H truncatum	2	0/1	
Horse			
H marginatum rufipes	10	0/1	
H truncatum	1	0/1	
All hosts	2539	12/172 (6·9%)	

$\log_{10}$ neutralising indices of 5·5 and 5·0 were obtained in tests in mice.

From 716 *Hyalomma marginatum rufipes* ticks collected from camels, 5 strains of CCHF virus were isolated whereas none were isolated from 620 *H dromedarii* collected from the same camels.

A serological survey by indirect immunofluorescence antibody (IFA) assay[2] with strain CCHF Ib Ar 10200 gave positive reaction rates of 32% (8/25) for cattle and, for rodents, 16% for *Arvicanthis niloticus* (7/43), 27% for *Mastomys erythroleucus* (3/11), and zero (0/2) for *Taterillus pygargus* and/or *gracilis*. Of 59 human sera tested 1 was positive.

From hospital records in Selibaby relating to haemorrhagic fever in this area we found two cases of haemorrhagic fever clinically compatible with CCHF which occurred in 1982 among stock breeders.

A serological survey was also done with Rift Valley fever (RVF) virus by IFA using strain ArB 1976-Zinga. 9 of 26 (35%) camel breeders had antibodies, with titres ranging from 16 to 128. In contrast, no antibody was found in 7 sera of butchers or in 26 sera from residents of this area who were not connected with camels. Antibodies were also present in 2/25 cattle, but 0/56 rodent sera had IFA antibody to RVF virus. The human sera were also treated by IgM antibody capture ELISA with an inactivated RVF antigen. 2 sera were positive (titres 200 and 1600), indicating recent infection. RVF virus was not isolated from ticks or from rodent and cattle organ pools.

These results suggest that in the Selibaby area, CCHF virus is enzootic. The incidence of CCHF in man seems low but cases have been reported.

Investigations are needed to determine the distribution of CCHF virus in Mauritania and its relation to haemorrhagic syndromes in man; the role played by camels in the spread of CCHF virus in northern Mauritania during the rainy season and during migrations; the differences between *H marginatum rufipes* and *H dromedarii* in their tendency to be infected by and to transmit CCHF virus; the significance of rodents in maintaining CCHF virus circulation in the Selibaby area; and the relation between Rift Valley fever and camels in Mauritania.

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CRIMEAN-CONGO HAEMORRHAGIC FEVER AND RIFT VALLEY FEVER IN SOUTH-EASTERN MAURITANIA

SIR,—A case of haemorrhagic fever caused by Crimean-Congo haemorrhagic fever (CCHF) virus[1] in May, 1983, in a patient who lived in Selibaby, south-eastern Mauritania, prompted an epidemiological survey in this area in March, 1984. The area around Selibaby is undifferentiated dry savannah. It is an important cattle-raising area, especially during the dry season when herds migrate from the north of Mauritania. During 1982 and 1983, the migration was intensified by the drought. The patient owned a large herd of camels about 20 km from Selibaby and was staying with the herd when he fell ill.

We collected ticks from camels, cattle, sheep, goats, and horses, blood samples from cattle, rodents, and humans, and organ pools from rodents and cattle, in and around the Selibaby area, including the Bakel region of Senegal which lies along the border. CCHF virus isolation from ticks is summarised in the table.

CCHF virus strains were identified by complement-fixation test with mouse immune ascitic fluid to the reference Ib Ar 10200 strain of virus. One of the strains isolated, ArD 38554, was compared by neutralisation test with the reference strain to provide definitive identification of the virus. Identical homologous and heterologous