Short Report

Seroepidemiology of Hantaan-related virus in Gabon

A. DUPONT, J. P. GONZALEZ, A. GEORGES and B. IVANOFF
1International Centre of Medical Research (CIRMF), P.B. 769, Franceville, Gabon; 2Viral Ecology Laboratory, ORSTOM, P.B. 923, Bangui, Central African Republic; 3Institut Pasteur, P.B. 923, Bangui, Central African Republic

Haemorrhagic fever with renal syndrome (HFRS) has been described mainly in Asia and Europe. Serological evidence of infection by Hantaan or a related virus has more recently been reported in Africa: in Gabon, only one of 30 sera examined was positive (GONZALEZ et al., 1984). In Senegal, SALUZZO et al. (1985) reported a prevalence of 16.5% in inhabitants of Kabrousse, with 31% of tested rats seropositive.

We have conducted an epidemiological survey in a village in the Province of Haut-Ogooue (south-east Gabon). We examined 213 people (80% of the population) and obtained blood samples. Antibodies to Hantaan virus were tested for by an indirect immunofluorescent assay, using as antigen Vero E6 cells infected with strain 76-118 of Hantaan virus (GONZALEZ et al., 1984). Of the 213 sera tested, 17 (8%) were positive with IgG titres between 1 in 16 and 1 in 128. IgM antibodies, at titres of 1 in 16 to 1 in 32, were found in 4 of the IgG positive sera but none of the IgG negative sera. The age range of individuals with positive serology was 4 to 70 years. No sex difference was observed. No symptom of haemorrhagic or renal disease was noted. Urine examination, using semiquantitative strips, showed only 2 cases of low proteinuria (0-30g/l) and one of haematuria (>500 RBC/µl). None of the 4 people with IgM antibodies had urine abnormalities. Creatineline levels were high (>130 µmol/litre) in 8 cases including 2 of those with IgM antibodies. The mean creatinine level was significantly higher in people with antibodies to Hantaan virus (154 µmol/litre) than in 32 age and sex-matched controls (99 µmol/litre, P<0.001).

It is difficult to evaluate the role of HFRS in febrile illnesses in rural Africa, which may have many other causes. None of the people with anti-HFRS antibodies had a haemorrhagic syndrome, but we have no other explanation for the elevated creatinine levels.

These serological results confirm the presence of Hantaan-related virus in Gabon, and indicate a higher frequency than previously reported. The clinical picture appears similar to the non-haemorrhagic nephropathy described in northern Europe, or to the silent or atypical forms of HFRS postulated by TKACHENKO et al. (1982).

As suggested by GIBBS et al. (1982), clinicians in Africa should be aware of the possible role of Hantaan or related viruses in patients presenting with fever of unknown origin, renal dysfunction and no haemorrhagic symptom.

References


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