DOI 10.2450/2009.0074-09

ABS50 **WEST NILE VIRUS AND THE ITALIAN BLOOD SYSTEM**

Liumbruno G.M.[(1)], Pupella S.[(1)], Catalano L.[(1)], Calizzani G.[(1)], Silvestri A.R.[(2)], Randi V.[(2)], Zucchelli P.[(2)], Grazzini G.[(2)]
[(1)] Italian National Blood Centre, National Institute of Health, Rome, Italy; [(2)]Centro Regionale Sangue della Regione Emilia-Romagna, Bologna, Italy

Background On 20th September 2008, West Nile virus (WNV) IgM and IgG antibodies were detected in a patient living in Bologna district, Emilia-Romagna region. Nine days later, the disease was confirmed to be the first human case of WNV neuroinvasive infection (NI) ever occurred in Italy. On 3rd October 2008 a second human case of suspected WNV NI was identified in Ferrara district. Serum and cerebrospinal fluid samples were positive for WNV IgG and IgM antibodies; two different RT-PCRs gave positive results. On 30th October a third human NI was diagnosed in the province of Rovigo, Veneto Region.

Aims The objectives of this report are to describe the epidemiological surveillance strategy and the precautionary measures adopted for blood safety.

Methods In October 2008, active animal surveillance identified various horses affected by West Nile Disease (WND) in several stables in the provinces of Ferrara, Bologna, Mantua, Rovigo, Padua and Venice. WNV had also been detected in wild birds in Emilia-Romagna. Active surveillance of all cases of human meningo-encephalitis was started on 16th September all over the Emilia-Romagna and later extended to selected areas of the regions of Lombardy and Veneto.

Grading of the risk and precautionary measures adopted:

- grade 1: bird mortality due to WND: no precautionary measures;
- grade 2: horse morbidity: donor serum storage for sixty days;
- grade 3: human morbidity: WNV NAT and 28-day deferral for blood donors resident or having been for at least one night in the affected areas during the 28 days preceding donation.

On 3rd October the National Blood Centre (NBC) alerted the European Commission's Health Threats Unit, subsequently keeping timely contact for further evolution.

Results The above measures were introduced in Emilia-Romagna on 1st October 2008 and in Veneto on 30th October 2008. WNV NAT was introduced to test all blood donations from donors living in the interested areas and all available samples from donations collected during the two preceding weeks. On 3rd October the NBC indicated to all Blood Centres nationwide 28 day deferral of donors who had been for at least one night in the affected districts. As to cord blood donations, WNV NAT test was indicated for all mother-donors resident or having been for at least one night in the above provinces during the 28 days preceding the day of delivery. On 8th October 11 European national competent authorities (ENCA) had

accordingly modified their donor selection criteria, whereas 5 ENCA had adopted a "watch and wait" strategy. On 1st and 6th December 2008, all precautionary measures were suspended, respectively, in the districts of Bologna and Ferrara, and Rovigo. Active animal and human surveillance is planned to last until December 2008.

Conclusion A quick alert system is fundamental both for haemovigilance in the in the complex Italian blood system framework and for the European haemovigilance network, especially when emerging pathogens have a relevant potential to threaten blood safety and to be a challenge to the maintenance of the blood inventory.