

# **WEST NILE VIRUS INFECTION, A NEW CHALLENGE IN ENSURING BLOOD TRANSFUSION SAFETY.**

***G. Hanganu, D. Gheorghe, M. Catana, M. Coman***  
Blood Bank PLOIESTI

## **Introduction**

The epidemiological situation in the European Union created by the increasing number of cases of infection with WNV between 2008-2010 led to the need for a guide of recommendations applicable to ensure transfusion safety measures in the affected areas, depending on the assessed risk. After the 1996 WNV epidemic, MS has implemented in the territory at risk (counties bordering the Danube), the vector activity period (May-October) surveillance system with WNV infection.

## **Material**

There have been confirmed cases of human infection annually. Specific measures have been taken transfusion system since 2008. Applying ensuring blood transfusion safety measures allowed without impairment of transfusion therapy management in counties affected areas. West Nile virus of the family Flaviviridae, found in both tropical regions and in the temperate. It mainly infects birds, but infects and humans, horses, dogs, cats, bats, chipmunks, skunks and domestic rabbits. The main route of human infection is through the bite of an infected mosquito. Transmission is by infected mosquitoes. In very few cases, there was a virus transmitted through blood product transfusion, organ transplants, breastfeeding and even trans placental.

Interest practitioners with West Nile virus increased when it was discovered in the US in New York, in 1999, when 66 cases were confirmed that resulted in seven deaths. About 80- 90% of infected people show no symptoms. The incubation period is 3 - 14 days after contact with the virus.

Infection with West Nile Virus has three clinical forms.

Meningitis or encephalitis 1. About 1 in 150 people infected with West Nile virus develop severe symptoms of the disease: high fever; headache; neck stiffness; stupor; disorientation; coma; tremors and convulsions; muscle weakness; vision loss; numbness and paralysis; Symptoms may persist over several weeks, and neurological effects may be permanent. Recovery is a long period of convalescence.

2. Febrile syndrome About 20% of infected people show symptoms of moderate severity: fever; headache; nausea, vomiting, anorexia, diarrhea; muscle and joint pain; rarely swollen lymph nodes;

The symptoms for a period of 7-10 days, although weakness may persist for up to several weeks and lymphadenopathy to 2 months.

3. Asymptomatic infection: approximately 80% (4 of 5 people) infected show no symptoms. West Nile virus infection diagnosis is made by molecular biology and clinical examination. Testing is performed only in patients who have severe symptoms because there is no treatment for West Nile virus infection. Acknowledge by PCR testing, or analysis of CSF. There is no specific treatment for the infection W NV. In the case of the medium severity manifestation of symptoms, improves the patient's condition after a few days without treatment. In case of severe, hospitalization is required and treat the patient with symptomatic medication for supportive.

**Conclusions:** Testing of donated blood for WNV by PCR is useful for Transfusion Safety.