

Outbreak of Legionnaires' disease in Lisbon area - Portugal

An outbreak of Legionnaires' disease has been identified in Portugal on 7th November 2014 in three parishes (Póvoa de Santa Iria, Forte da Casa e Vialonga) of Vila Franca de Xira municipality, situated 30 Km north of Lisbon. Vila Franca de Xira is not considered to be a touristic destination and so far no case has been confirmed outside Portugal.

Epidemiological data

Up to 17th November (13:00 GMT), 331 cases have been identified (322 in Lisbon Region, 3 in North Region, 5 in Centre Region, 1 in Algarve Region). From these 8 patients (6 male and 2 female) have died (aged between 52 and 89 years). The case fatality rate is 2.4%. All cases were infected in Vila Franca de Xira.

Outbreak investigation

By 7th November, both epidemiological and environmental investigation was put in place. On 9th November, as a precautionary measure, cooling towers from major industrial installations in the area of Vila Franca de Xira have been closed. Later on 14th November the outbreak has been considered controlled, as the number of cases per day has dropped to very few. The matching process of samples from both human and environment was performed and conclusions on possible sources were established as well as further control measures were implemented.

Blood Safety

The transmission of *Legionella* through transfusion of infected blood and blood components has not been reported in the scientific literature. It seems that the combination of leucocyte depletion from blood and the effect of low storage temperatures on blood components, erythrocytes and plasma, minimise the risk of *Legionella's* transmission through transfusion. However, platelets stored at room temperature could be a critical blood component for bacterial growth and transmission. Pathogen inactivation of platelets would eliminate this risk.

Although the incubation period of Legionnaires' disease is two to fourteen days, incubation periods up to 19 days have been described. Therefore considering the precautionary principle, the following blood safety measures have been adopted:

Precautionary Blood Safety Measures in the affected area (Vila Franca de Xira)

- Cancelling blood donor sessions during the outbreak.
- Quarantine of all RBC fractions from blood collected during the 28 previous days of the outbreak onset.
- Disposal of platelet components which have not been pathogen inactivated.
- Active monitoring of the onset of donor symptoms in the following 21 days after blood donation.
- Enhancement of look-back procedures.

Precautionary Blood Safety Measures Nationwide

- Temporary deferral of potential blood donors, resident or who have visited the affected area, since the beginning of October 2014, for a period of 28 days.
- Temporary deferral of confirmed cases of Legionnaires' disease infection for 28 days after recovery.
- Enhancement of post donation information.
- Reinforcement of post transfusion haemovigilance.