

EXPERIENCES IN NAT SCREENING PRIOR TO RELEASING CELLULAR COMPONENTS BY A BLOOD BANK OF ARGENTINA (P-276)

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Despite sustained improvement of donor selection and serologic screening assays, there still remains a small but significant transfusion risk for hepatitis C virus [HCV] and human immunodeficiency virus [HIV]. The risk is due to the failure of the screening tests to detect all the infected blood donations and in particular those which are recently infected in the pre-seroconversion window phase of infection. The introduction of nucleic acid techniques (NAT) in blood banks for the detection of HIV and HCV has meant a great advance in decreasing the residual risk of HIV/HCV transmission by blood transfusion.

From May 2004 to December 2006, 20869 consecutive blood donors were screened for anti-HCV and anti-HIV by EIA (enzyme immunoassay, 3rd generation) antibodies. The non reactive samples were pooled (x 96) to detect HIV RNA and HCV RNA by in house methods validated using the WHO International Standard 96/790 for HCV and PSW1, PSW2 and PSW3 as positive control for HIV.

The viral RNA extraction were followed by retrotranscription with random primers for HIV and specific primer for HCV and nested-PCR of the HIV pol region and the 5' non coding region of the HCV.

In the EIA screening we detected anti-VHC in 30 (0.15%) donors and anti-VIH in 11 (0.05%).

In the molecular screening, we only detected HIV RNA in one donor. This donor was a 26 years old man with negative anti-HIV antibodies (AxSYM, Abbott). The viral load at this moment was 393972 copies/ml (Amplicor Roche). Twenty days later he had detectable anti-HIV antibodies and a viral load of 602771 copies/ml.

In our country NAT is not routinely practiced in blood banks because it is not an obligatory practice. This finding is the first communication of a positive result using NAT technology in Argentina.