

IMPROVED HBV DONOR SCREENING: SHOULD CURRENT HEPATITIS B RE-ENTRY PROCEDURE BE REASSESSED?

A. Glauser, J. Gottschalk, K. Hardegger, J. Ries, B.M. Frey
Blood Transfusion Service SRC, Zurich

Text: Nucleic acid testing (NAT) for Hepatitis B (HBV) was introduced at the Zurich Blood Transfusion Service SRC in April 2008 using the TaqScreen MPX test on the platform cobas s201 (Roche Diagnostics). On December 1st, 2015 we implemented the new MPX test on the system cobas 6800 (Roche Diagnostics). Using the new system, individual donation testing (ID-NAT) is possible instead of minipool testing (MP-NAT, n = 6) with the previous platform. Lower Limit of Detection (LOD) for HBV combined with ID-NAT by cobas 6800 increased screening yield of HBV positive blood donations. MP-NAT of 662,899 blood donations revealed 73 HBV DNA positive donations which were also positive for HBsAg and 4 HBV NAT only positive donations (HBV only), corresponding to a frequency of HBV only of 1:165,725.

Since implementing cobas 6800, in total 38,658 donations yielded 16 HBV positive donations (8x HBVNAT+/HBsAg+, 8x HBV-NAT+/HBsAg-), giving a frequency of HBV only of 1:4,832. Extended serology testing of HBV only revealed exclusively occult HBV infections (OBI, anti-HBc+/HBsAg-). Since all donations were given by repeat donors, look-back testing/procedures were initiated. Archive samples of 7/8 OBI donors were available for testing and 5/7 donors delivered HBV positive archive samples by ID-NAT (overall 6/28 HBV positive archive samples). Detailed results will be presented.

Conclusion: Since transfusion transmission of HBV by OBI donations cannot be excluded, we propose to reassess current HBV re-entry algorithm in Switzerland.