ABD PAD®: EVALUATION OF A NEW MANUAL ABO/RH BLOOD GROUPING METHOD

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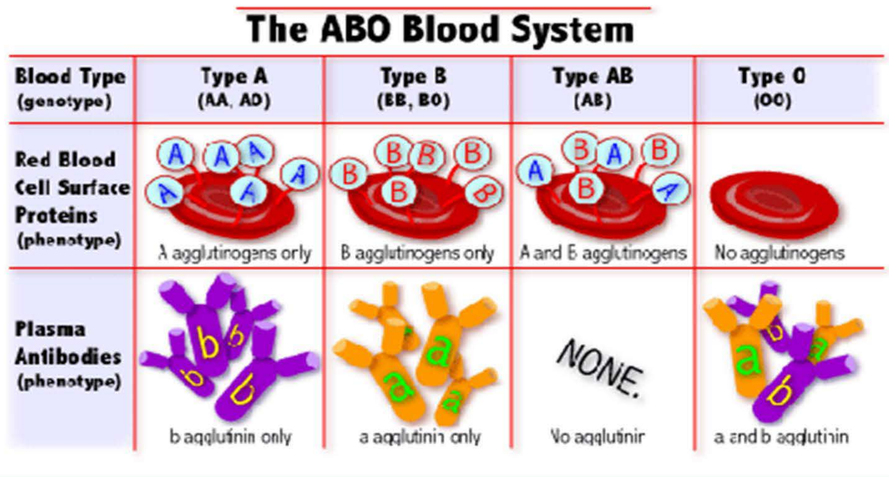
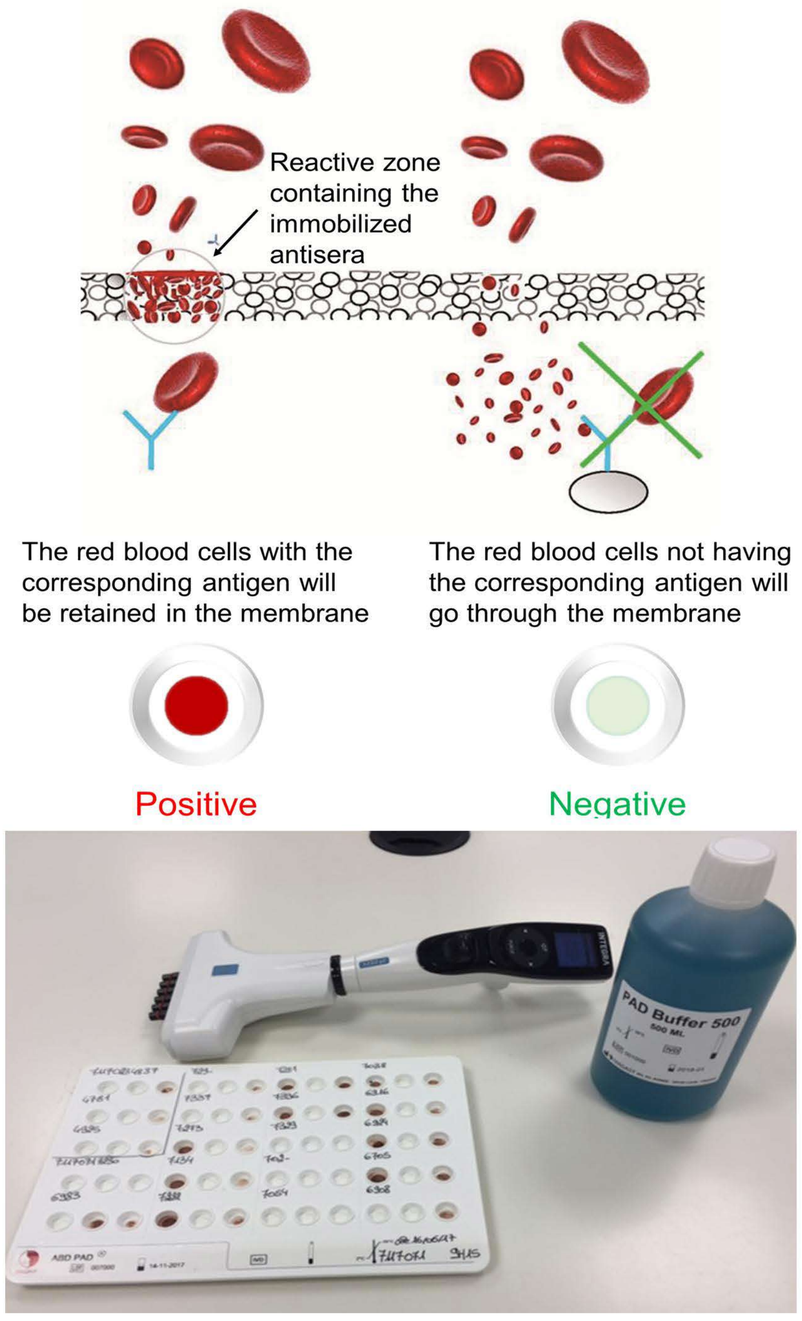
BACKGROUND

The ABD PAD® (DIAGAST, Loos, FR) is a new diagnostic device for a quick confirmation of the ABO blood group and the Rhesus (D) for donors and recipients. The kit uses M-TRAP® technology based on the immobilization of antibodies covalently bounded to a porous membrane.



AIMS

The aim of our study was to evaluate the performance, reliability, sensitivity and specificity of the device ABD PAD®.



METHODS

The ABD PAD® method was compared with a full automated microcolumn (Innova, Ortho Clinical-Diagnostics, Raritan NJ) and a microplate (NeoGalileo, Immucor, Norcross GA, USA) methods.
The study was carried out by 2 trained technicians according to the manufacturer's instruction. A total of 388 tests were performed on 325 blood donors samples, 51 segment of donation bags and 12 patient samples (4 cord blood, 1 patient treated with Daratumumab, 4 patients with red blood cells antibodies, 1 patient with weak D, 1 patient with anti-HLA antibodies and 1 patient with Cold Autoimmune Hemolytic Anemia were selected.
All samples, collected in EDTA, were stored between 2-8 °C and tested within 7 days of collection. The reaction of each ABD PAD® plate was read and interpreted immediately and again 24 hours later. The concordance between methods was assessed with the expected and historical results. In case of discrepancy, the sample was re-analyzed with reference methods.
If the discrepancy was not resolved, the test was also performed with tube test.

RESULTS

Concordant results between the ABD PAD® and the reference methods were obtained in 387 (99%) of the 388 samples. All the results in donor samples and segments of donation were concordant, whereas a patient sample with a Cold Autoimmune Hemolytic Anemia and a positive direct antiglobulin test was not concordant for the presence of a strong autoagglutination.

CONCLUSIONS

The ABD PAD® is an easy procedure that quickly provides confirmation of ABO/Rh typing. The test is certainly faster than the methods currently in use because the ABD PAD® plates are ready to use.
This method showed comparable results to the routine reference methods, suggesting that it can be useful to check the blood group or in emergency or at patient's bedside.

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