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0960-5592(1995)5:1:1-E

P25 AN ASSESSMENT OF PCR TYPING FOR Rh(D).Pailing, Margaret,

West Midlands Blood Transfusion Service, Vincent Drive, Birmingham..

The ante-natal service at the WMRTC offers prenatal monitoring of rhesus sensitised women by antibody quantitation. The ability to RhD type the fetus in the first trimester would significantly increase the options for treatment and management. The aim of this project was to assess the use of PCR techniques for RhD typing the fetus using amniotic fluid as described by Bennett (1993).

Shortly after starting the practical work correspondence and letters in scientific journals disputed the reliability of Bennetts primers. In view of this RhD typing of amniotic fluid was postponed and an evaluation of the primers was undertaken.

100 whole blood samples were serologically phenotyped on the Olympus blood grouping machine. The same samples were then typed by PCR using two sets of primers, one specific for the Rh CcEe gene and the other specific for the RhD gene. Three anomalies were detected. Two samples by PCR, gave amplification with the RhD gene only, yet typed serologically as CDe/cde. The third sample typed, by PCR as RhD positive, but serologically as Cde/cde.

These results suggest that the primers are not suitable for a diagnostic test without further study.

P26 FAILURE TO DETECT ABO INCOMPATIBILITY USING THE DIAMED GEL INDIRECT ANTIGLOBULIN TEST

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Several reports have been published on the sensitivity of the DiaMed gel system IAT method to detect warm reacting clinically significant antibodies but little has been published on its ability to detect ABO incompatibility. We report on the failure of the DiaMed gel system IAT method to detect ABO incompatibility with consecutive serum samples.

Patient Group	Donor Group	Number Tested	Failure Rate
O	A ₁	100	3%
B	A ₁	50	6%
B	A ₁ B	50	19%

All missed incompatibilities gave a positive reaction when a conventional tube IAT method was used. When Group B EDTA recipient plasma is tested against donor A₁B cells the missed incompatibility rate rises to 70%.

Our investigations support the theory that the centrifugal force required to move the donor cells through the sephadex gel density gradient actually disrupts weak agglutinins.

This may be confined to external glycolipid antigens with low antigen site density (such as A₁B cells) since similar antigens structures with high antigen density (such as A₁B cells) give strong incompatibility results with the same patient sera.

P27 A SIMPLE METHOD FOR MEASURING THE PROPORTIONS OF THE DIFFERENT RED CELL POPULATIONS WITHIN A BLOOD SAMPLE BY ACT-24

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1. Central Military Hospital, Budapest

2. Natl. Inst. of Haemat. and Blood Transfusion, Budapest

3. Cytotech Instruments Ltd., Budapest

In bone marrow transplantation and in certain transfusion situations it can be very important to determine the respective proportions of two red cell populations in the patient's circulation quantitatively.

The principle of the method: an antibody is added to the mixture of two red cell populations which agglutinates one of the components and leaves the other one in suspension. The concentration of the non-agglutinated population is compared to the original cell-concentration.

The ACT-24 performs the above procedure automatically.

A group 0 patient was transplanted successfully 7 years ago with her brother's group A b.m. Her ABO group began to revert to the original 0. Patient type cells began to appear first in Jan, 1994. The reversion was being followed:

May, 1994	38%
June, 1994	44
Aug, 1994	78
Sept, 1994	90
Oct, 1994	75*
Jan, 1995	0

*In September the patient underwent a treatment.

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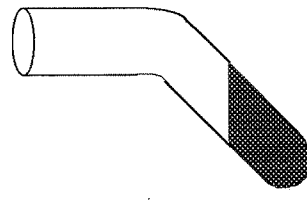
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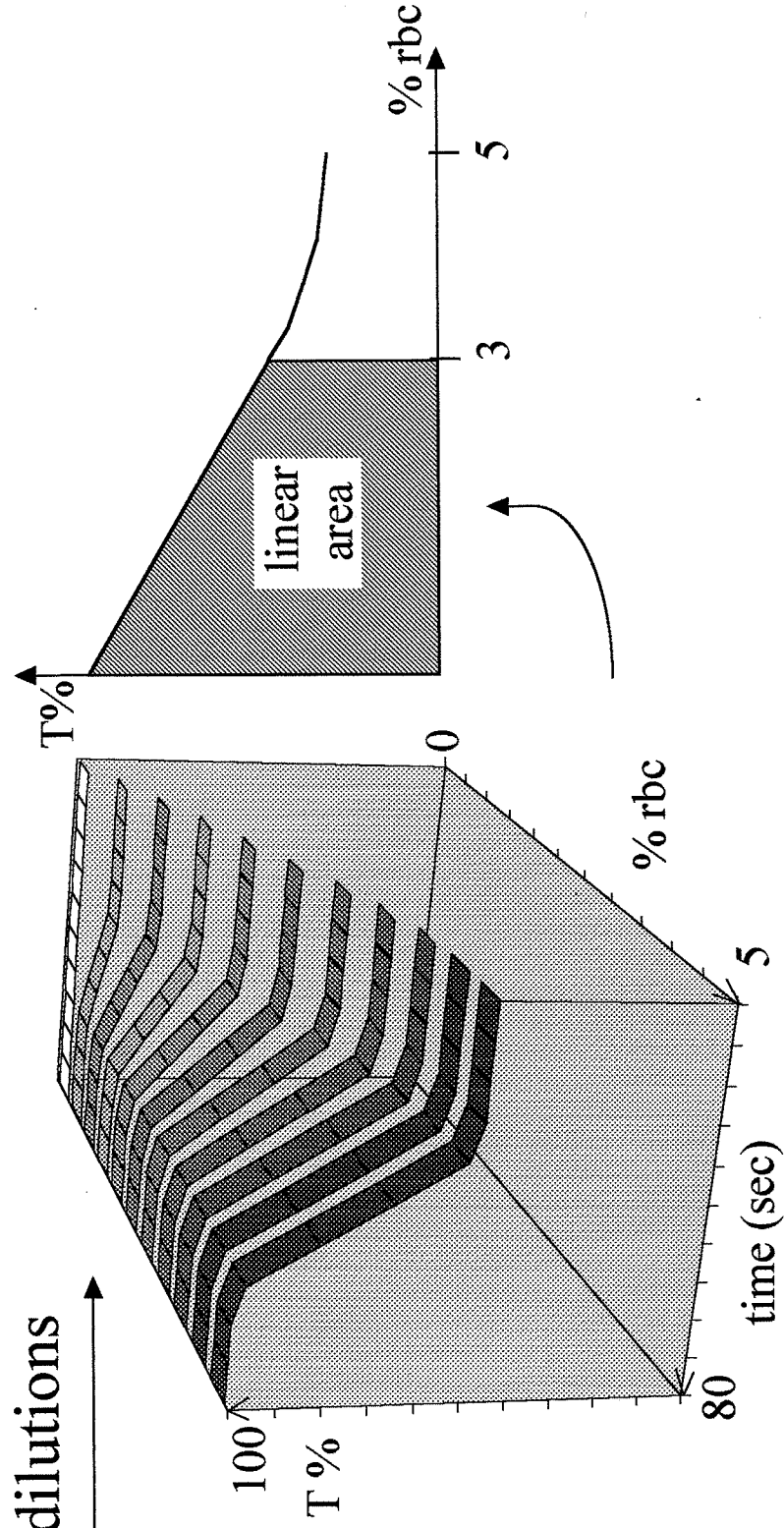
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Principle



5% rbc
suspension

dilutions



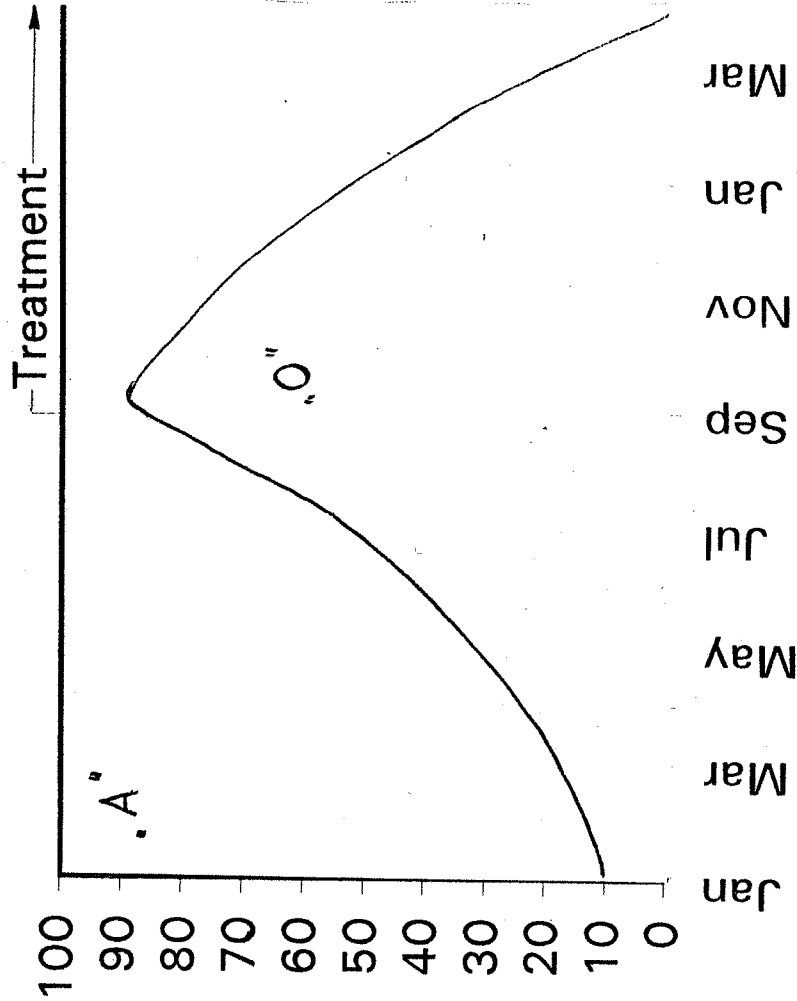
sedimentation curves

Case report

Recipient Cs. Zs. (female) Age: 38 (at the time of the BMT) Diagnose: CGL
 Donor Cs. B. (male) Age: 43

Recipient Blood type: O ce kk Fy(a+b-) Jk(a-b+) NN SS Le(a-b+) P1
 Donor Blood type: A ce kk Fy(a-b+) Jk(a-b+) MN Ss Le(a-b+) P1

Bone Marrow Transplantation: 2 April 1987 by August 1987 her blood typed as A



Rate of O rbc's in the patient's blood (%)
 (Reactions with a-A)

04 Febr 1994	0 rbc's reappear
02 May 1994	38
09 June 1994	44 *
16 Aug 1994	78
30 Aug 1994	81
09 Sept 1994	90
31 Oct 1994	75 **

*The same rate of rbc's neg. was observed also with a-M.

** In September the patient was treated with donor type Buffy coat.