

# USE OF LEUCODEPLETED RED BLOOD CELL CONCENTRATES-OUR 10TH YEAR EXPERIENCE

**Vitlarova J, Kamcev N, Dejanova V, Sorova M**

*Clinical Hospital Stip, Macedonia*

## Introduction

The removal of the leucocytes with the help of filtration improves the quality of red blood cell concentrates, with which the risk of appearance of post-transfusion non haemolytic febrile reactions, alloimmunisation, immunosuppression, post operative infections, virus contamination (CMV, HTLV), bacteria contamination has been minimized.

## Aim

To show the benefit from the use of red blood cell concentrates, poor with leucocytes produced with the help of filtration in patients chronically dependable from transfusion, treated in Daily transfusion hospital.

## Methods

In the last ten years in our Daily hospital 816 patients from Stip and from the municipalities from the eastern part of R.Macedonia, have been treated and they have needed blood transfusion once to twice per month, suffering from Thalassemia major, Sy.myelodysplasticum, Leucosis lymphatica chr. and malignant disease post operatively, chemotherapy and radiotherapy. The blood units (450 ml) were donated by voluntary repeated blood donors and the some ones were separated in period of 10-12 hours. The obtained red blood cell concentrates has been filtrated in period of 2-3 days and has been immediately used after this process.

## Methods

Filters for preparation of leucodepleted red blood cell concentrates have been used, produced by the firms TERUMO-IMUGARD III-RC and PALL-PURECELL RN. The procedure has been done manually by gravitation. The filtration time is from 18-20 min. The blood samples for analyses have been taken from the system before and after the filter and have been made at the Clinical hematologic laboratory. The following hematologic parameters have been determined: number of Er, Le, Tr and level of Hb and Hct.

## Results

With the use of these filters, red blood cell concentrates poor with leucocytes for about 99-99,9 % have been produced with which post-transfusion side effects of allogenic leucocytes have been prevented. The therapy effect is also important because the number of Er, Hb and Hct remain almost unchanged in the unit of filtrated blood.

## Conclusion

The use of leucoplated red blood cell concentrates improves the quality and safety of blood transfusion in patients chronically dependable from transfusion which makes their lives longer.