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HLA MATCHING AT EPITOPE LEVEL: AN EFFECTIVE APPROACH TO PROVIDE PLATELET TRANSFUSION SUPPORT IN PLATELET REFRACTORY PATIENTS IN A TERTIARY CARE ONCOLOGY CENTRE

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Introduction: Platelet refractoriness is the failure to achieve an acceptable increment in platelet count following platelet transfusion at least on two occasions. It is often multifactorial and is divided broadly into non-immune and immune causes. Immune platelet refractoriness primarily due to HLA alloimmunisation poses a major challenge in platelet transfusion support which can be dealt with HLA matched or crossmatched platelets. Another alternative is to give platelets matched at HLA- epitope level.

Methods: The eplet version of HLA Matchmaker represents a more complete collection of HLA epitopes and provides an elaborate assessment of HLA compatibility. We report here three patients who responded to HLA-epitope matched platelet transfusions from unrelated healthy donors.

Results: Duquesnoy antigen match grade for the three patients were B1X, D and D while Panel reactive antibody (PRA) was 23%, 8% and 85% respectively. Corrected count increment (CCI) within10-60 minutes of unmatched platelet transfusion were 1600 and 2667 in first patient; 4800 and 3200 in second patient and 1200 and 3200 in third patient on two consecutive occasions. CCI within 10-60 minutes of epitope matched platelet transfusion were 12,750, 21,000 and 12,000 respectively.

Conclusion: HLA epitope matching approach in immune refractory patients can have very impressive 1 hour CCI results. It can be expected to benefit platelet transfusion outcome and increase the number of compatible donors for refractory patients..

Biography

Dr. Anisha Navkudkar is a budding Transfusion Medicine Specialist from India. She has completed her M.D in Immunohematology and Blood Transfusion from the prestigious institute, Tata Memorial Centre, Mumbai. She is also the recipient of the President, NBE Gold Medal Award for her DNB examination. Her academic interests lie in Voluntary Blood Donor Program, Advanced Immunohematology Techniques, Molecular Typing, Therapeutic Apheresis, Quality Management System and HLA Typing.

She is a member of various renowned scientific societies like ISBT, AABB, and ISTM. She has won awards for oral and poster presentations at various National and International Conferences and has publications in various journals too. Her enthusiasm is infectious which propels her colleagues too in working towards continual improvement of this field.

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