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LUMINEX ASSAYS – THE NEW REVOLUTION IN RENAL TRANSPLANTATION IN INDIA

Mahendra N Mishra

Baptist Christian Hospital, India

Background: The prevalence of End Stage Renal Disease (ESRD) in India is approximately 151 -232/ million which translates into 220,000 individuals. With approximately 7500 transplants every year only 3.4 % of patients are provided optimal treatment. Deceased donor transplant accounts for < 0.5% of all transplants only. No precise data is available regarding the donor profile, but in a standalone commercial laboratory in India of 705 samples over three-year period, nearly 40% of the donors were unrelated,15% non- first-degree relatives and 18% spousal.

Methods: 748 pre-transplant and 169 post- transplant samples from prospective recipients were evaluated for HLA- class I and II donor specific IgG antibodies. Additional tests included pooled bead assay and PRA specification on 52% and 5 % samples of pre-transplant samples respectively. The laboratory added value to these tests by semi-quantitative grading. Donor profile was scrutinized.

Results: Luminex Crossmatch in combination with pooled bead assay was found to be an economical and very useful strategy for evaluation of sensitization and antibody monitoring in nations with economic constraints. Less than half the donors evaluated were first degree relatives and deceased donations accounted for less than 0.5 %.

Conclusion: Luminex based pooled bead assay and crossmatch are valuable and cost-effective for recipient work up and there is an urgent requirement to promote deceased donor transplant in Indian Subcontinent.



Note: