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A Study in Heart Transplant Patients: **Especially Class-II anti-HLA Antibodies may Remain Persistent**

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Method

In heart transplants, it is important that the donor source is limited and the donated organ is transplanted to the most appropriate recipient. During the evaluation of recipients, knowledge of anti-HLA antibodies (class-I, class-II) and transplantation preparation is a priority in planning pre- and post-transplantation treatment and determining the risks.

The aim of the study is to investigate the response of anti-HLA antibodies, which are known to be clinically compatible, to desensitization treatment.

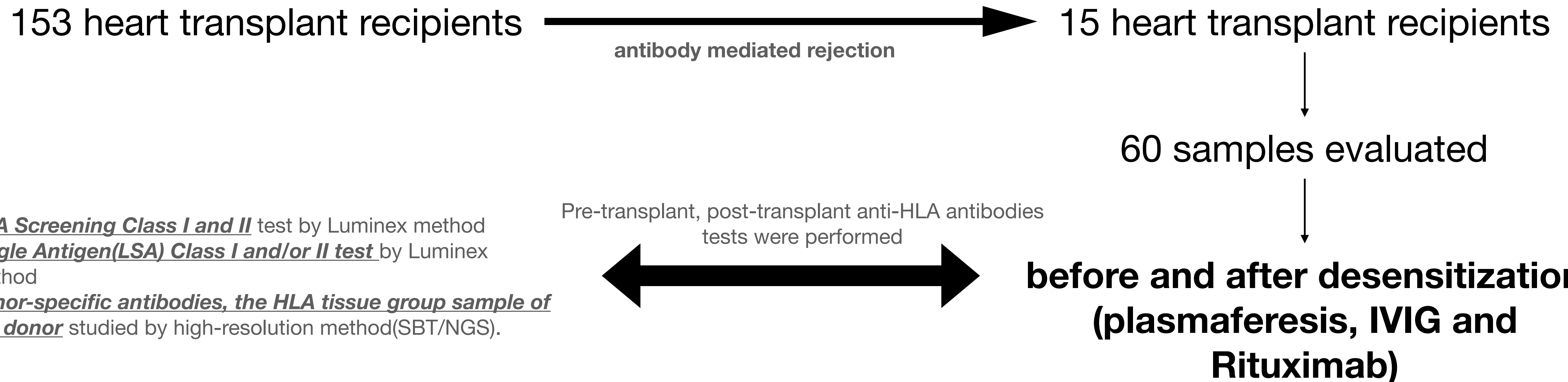
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Introduction

In our centre, 15 of a total of 153 heart transplant patients received desensitisation treatment with the diagnosis of antibody mediated rejection. A total of 60 samples from the 15 patients evaluated in the study were followed in our center for at least four years and patients before and after desensitisation (plasmaferesis, IVIG and Rituximab) were evaluated.

Pre-transplant, post-transplant anti-HLA antibodies tests were performed in the Tissue Typing and Transplantation Laboratory of Başkent University Adana Dr. Turgut Noyan Research and Medical Center. Serum samples of the patients were tested for ***PRA Screening Class I and II*** (One Lambda, Inc., Canoga Park, CA, USA) test by Luminex method. ***Single Antigen(LSA) Class I and/or II*** (One Lambda, Inc., Canoga Park, CA, USA) by Luminex method. MFI \geq 1500 were considered positive. In order to determine the presence of ***donor-specific antibodies, the HLA tissue group sample of the donor was studied by high-resolution method(SBT/NGS).***



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Results & Conclusion

The presence of anti-HLA antibodies before transplantation was found to be approximately 4% in patients who applied to our centre for transplantation.

15 heart transplant recipients

↓
before or after transplantation, it was found that class-II anti-HLA antibodies, especially the ***HLA-DQ group, were more resistant to treatment.***

↙
Samples with MFI values of 10.000 and above did not decrease at the expected level after desensitization, even increased in some patients.

↓
Samples with MFI values of 10.000 and below were decreased.

↘
In patients who received ***2nd desensitisation treatments, a time-dependent (approximately in 2 years) decrease in resistant antibodies were observed.***

→
anti-HLA Ab (MFI>10.000) was detected before transplantation

2 heart transplant recipients

(one of whom was class-I and the other was class-II)

↓
received desensitization therapy during the pre-transplant period

Considering that resistant anti-HLA-antibodies may decrease over time, especially after the second desensitization, monitoring them is important for planing the treatment.