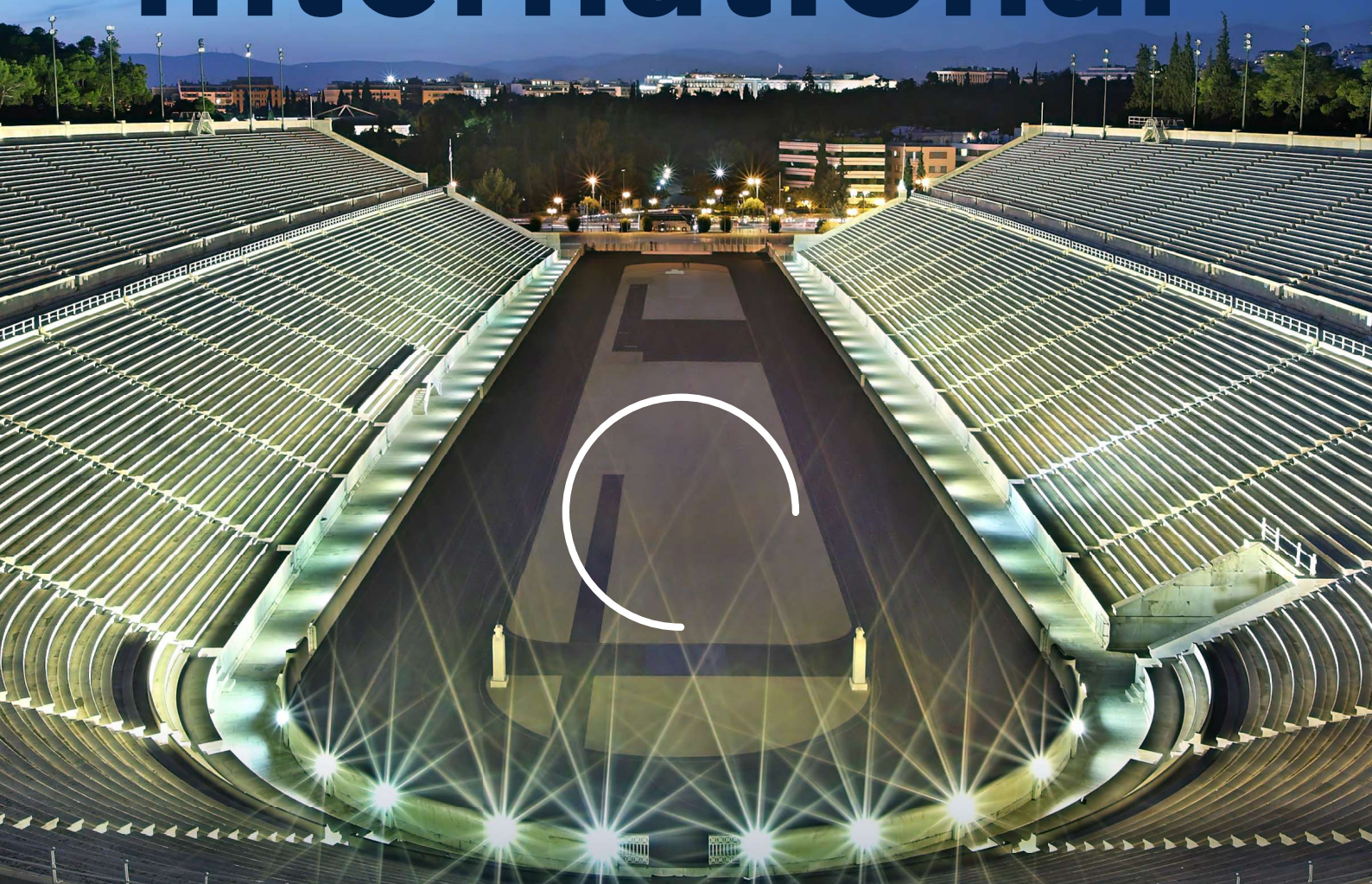
ESOTCongress

THE INTERNATIONAL TRANSPLANT CONGRESS®

ATHENS | 17-20 SEPTEMBER 2023

Transplant International



21st Congress of the European Society for Organ Transplantation

17 September - 20 September 2023. Athens, Greece

esotcongress.org

P641 POST-TRANSPLANT DONOR SPECIFIC ANTIBODIES DYNAMICS CAN BE PREDICTED USING C3D ASSAY IN ASSESSMENT FOR HLA-INCOMPATIBLE KIDNEY TRANSPLANTATION

Sunil Daga[*1;2;3], Adarsh Babu[3;4], Mason Phillpott[5], Nithya Krishnan[6], Rob Higgins[6], David Briggs[7], Natasha Khovanova[5]

[1]Saint James Hospital, Leeds, United Kingdom, [2]NIHR MIC (Leeds), University of Leeds, Leeds, United Kingdom, [3]Warwick Medical School, Coventry, United Kingdom, [4]Gloucester Royal Hospital, Gloucester , United Kingdom, [5]School of Engineering, University of Warwick, Coventry, United Kingdom, [6]University Hospital Coventry & Warwickshire, Coventry, United Kingdom, [7]NHS Blood & Transplant Birmingham, Birmingham, United Kingdom

Background: HLA-incompatible kidney transplantation outcomes can be variable. Pre-transplant/ pre-desensitisation diagnostic tests can help predict behaviours of donor specific antibodies post-transplantation and associated worse outcome. This study explores value of C3d assay in prediction of post-transplant dynamics of DSA.
Methods: 134 patients were transplanted against donor-HLA-specific antibodies (DSA). 93 cases had post-transplant DSA dynamics classified by unsupervised machine learning into five distinct DSA response groups and of these 92 had C3d assay performed on samples before desensitisation.
Results: C3d positive DSA was detectable in 1 out of 20 cases that had no DSA responses following transplantation (Group 0). Modulation group (Group 1 and 2) (N=41 cases) where DSA rose rapidly and then fell within first month post-transplantation had 7 cases with C3d positive DSA whilst the Sustained dynamic group (Group 3 and 4) (N=31) where antibody levels stayed high and did not fall had 19 cases with C3d positive DSA. This was statistically significant (p =0.0002).
Conclusions: Our analysis suggests using solid phase assay on pre-desensitisation treatment for HLAi transplant can predict post-transplant dynamics of DSA that are associated with rejection and poor graft survival long term. Thus the use of this assay for delisting and risk stratification is suggested.

P642 LATE NON-CATHETER-RELATED VENOUS THROMBOTIC EVENTS IN LUNG TRANSPLANT RECIPIENTS

Ivan Barone[*1], Letizia Corinna Morlacchi[1], Valeria Rossetti[1], Chiara Premuda[1], Francesco Damarco[2], Lorenzo Rosso[2], Francesco Blasi[1]

[1]Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico di Milano, Internal Medicine Department, Respiratory Unit and Cystic Fibrosis Adult Centre, Milan, Italy, [2]Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico di Milano, Thoracic Surgery and Lung Transplantation Unit, Milan, Italy

Background: Deep venous thrombosis (DVT) is a common complication in lung transplant recipients (LTRs) and is associated with higher 1-year mortality rates. Even within our population of LTRs, the majority of thrombotic events occur shortly after surgery and are generally related to the use of central venous catheter (CVC) or extracorporeal membrane oxygenation (ECMO). Instead, we hereby present a report focusing on thrombotic events that occurred at least 60 days after surgery and in sites that weren't used for CVC or ECMO application.
Methods: This study is a retrospective analysis from a tertiary-care, university-affiliated referral centre based in Milan, Italy. Clinical records of all lung transplant recipients between January 2014 to August 2022 were reviewed for thrombotic events. Demographic information and preoperative patient characteristics including age, sex, indication for transplantation, immunosuppressive therapy at the time of the event and risk factors for thrombophilia were reported. Follow-up was obtained until Jan 15, 2023. Thrombotic events in sites of CVC or ECMO and/or occurring within 60 days from transplant were excluded.
Results: The study comprised 13 patients (see image 1), 9 of which were men (69%). Indication for transplant: 5 cystic fibrosis, 4 COPD, 4 interstitial lung disease. Median age was 56 (24, 67) years. 3 patients (23%) had a history of venous thrombosis and 2 patients (15%) had a history of pulmonary embolism; these same 2 patients were also the only ones to have genetic coagulopathy (hyperhomocysteinemia and factor V Leiden). See table 1 for other risk factors. Median time of first-time thrombotic event occurrence from transplantation was 134 days (74, 1757). Of all events in this group of patients, 7 (54%) were DVTs of lower extremities. We also recorded 3 cases of pulmonary embolism, 2 of them were concomitant with DVTs.
Conclusions: Lung transplantation is a pro-thrombotic condition and DVT can be a relevant problem not only in the postoperative period. Approximatively 18% of LTRs of our patients with a diagnosis of thrombosis had a late event, i.e. in a period of time when surveillance for thrombosis is usually low, as the majority of lung transplant centers are only screening for thrombosis shortly after ICU discharge.

Image 1

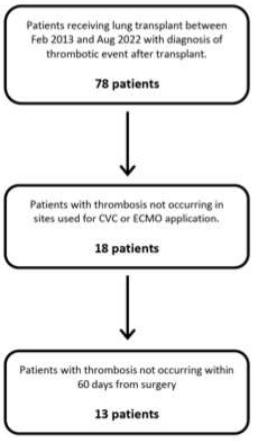


Table 1 – Risk factors for VTE

Risk factors	
EVEROLIMUS as part of maintenance immunosuppressive regimen	2 (15%)
Major orthopaedic surgery	0
Lower-extremity paralysis due to spinal cord injury	0
Fracture of the pelvis, hip or long bones	0
Multiple trauma	0
Cancer	1
Previous history of VTE/PE	2 (15%)
Age > 40 yrs	11 (85%)
Obesity	2 (15%)
Immobility	0
Oral Contraceptives or estrogen treatment	1 (8%)
Family history of VTE	2 (15%)
Physical inactivity	1 (8%)
Genetic blood conditions that affect clotting	2 (15%)