



Strategies to Circumvent Discrepancies in Pre-Transplant Donor Specific Antibodies Workup

Dear Editor,

Accurate assessment of donor-specific antibodies (DSAs) plays a pivotal role in pre-transplant evaluation to mitigate the risk of graft rejection.¹ However, a challenging dilemma arises when DSA-SAB results show positive results, but other assays,

such as complement-dependent cytotoxic crossmatch (CDC-XM) and flow crossmatch (FC-XM) provide negative results.

We present two cases to illustrate the diagnostic challenges encountered during the pre-transplant workup:

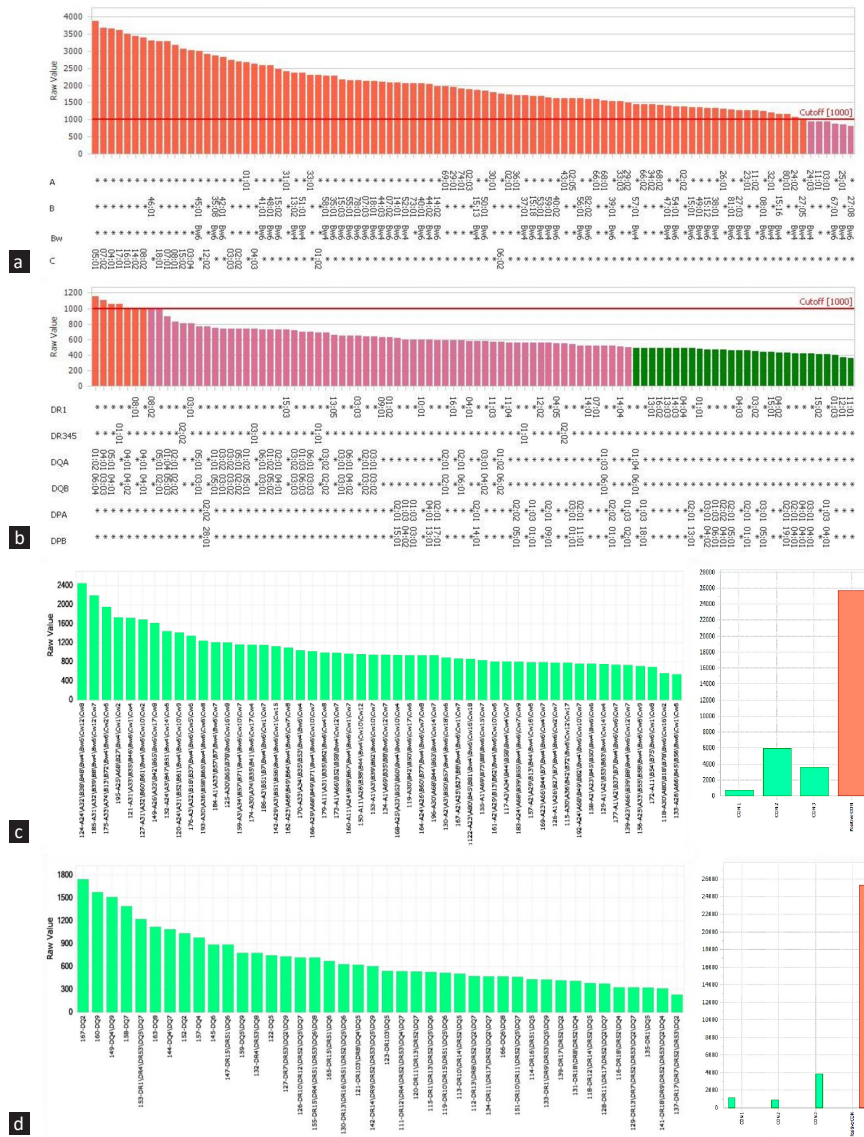


Figure 1: Assessment of true or false anti-HLA antibodies: a case. Figure showing broad reactivity to (a) HLA-class I single antigen beads profile; (b) HLA-class II single antigen beads profile; (c) HLA-class I PRA beads profile; (d) HLA-class II PRA beads profile. Colored rectangles indicate the MFI of antibodies for corresponding HLA antigens. (a and b): Red color indicates MFI \geq 1000, purple indicates MFI \leq 1000 and dark green indicates MFI \leq 500. (c and d): Green color indicates negative bead reactions for a particular HLA antigen, and orange indicates positive bead reactions. (Y-axis: MFI values, X-axis: SAB HLA specificity) HLA: Human leukocyte antigen, PRA: Panel reactive antibody.

Case 1: A 31-year-old man underwent a pre-transplant evaluation including CDC-XM, FC-XM, panel reactive antibody (PRA) testing, and DSA-SAB assay with his father as a donor. Despite negative results in CDC-XM and FC-XM, the DSA-SAB assay revealed unexpected weak-to-moderate positivity (MFI range = 1000-5000) against a wide range of HLA class I and class II antigens [Figure 1a and 1b]. PRA testing showed no HLA sensitization [Figure 1c and 1d], but the test negative control (CON) values were high, indicating the nonspecific binding, which leads to false-positive tests. In such a scenario, PRA testing alongside DSA-SAB helps.²

Case 2: A 33-year-old man was planned for transplant with his sister as a donor. Patient exhibited HLA class II positivity for self-antigen DRB1*13:01, in DSA-SAB testing (Immucor). However, CDC-XM and FC-XM were negative. Repeat testing with another kit from a different vendor (One Lambda, Inc.) showed the absence of antibodies for self-antigen DRB1*13:01. Reported false positivity may occur due to the presence of antibodies to denatured antigens.^{2,3}

We propose stepwise strategies to address these diagnostic challenges:

1. Patient history should be assessed thoroughly for sensitization events.
2. Conduct high-resolution typing and utilize multiple assays to determine true antibodies, including different platforms, solid-phase assays and kits from other vendors.
3. Perform epitope analysis to decipher antibody specificities.⁴

This letter emphasizes the importance of quality control, technical validation, and personalized patient-focused assessments in pre-kidney transplant evaluations.

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Conservatively Managed Spontaneous Splenic Rupture in a Hemodialysis Patient

Dear Editor,

A 68-year-old diabetic male with 8-year dialysis vintage reported to Emergency room in March 2023, with a 4-day history of pain left upper abdomen radiating to the left shoulder (Kehr's sign). He appeared anxious with BP of 100/70 mm HG and pulse of 96/min. On examination, there was tenderness and guarding in the left hypochondrium. His hemoglobin was 9.6 g/dl and was leucocyte count was 13,900/cmm. USS showed large tear with a hematoma in the spleen and CT confirmed Class 3 tear (moderate–severe) with hematoma [Figure 1]. Other relevant investigations were negative. As the patient was hemodynamically stable, it was decided to manage him conservatively with close hemodynamic observation, bed rest and avoidance

of anticoagulants (during HD) and antiplatelet drugs. Ambulation was started after a week and heparin was reintroduced after 2 weeks. The patient recovered smoothly. Appropriate patient consent was obtained.

Splenic tear usually results following road traffic accident or trauma. Spontaneous splenic rupture (SSR) is rarely reported. Liu *et al.* in a series of 251 cases of ruptured spleen found 8 cases of SSR (3.2%).¹ In an analysis of risk factors in 848 reported cases of SSR over 28 years, Renzulli *et al.*² found underlying neoplasm (30.3%), infection (27.3%) or non-infectious causes (20.0%), and drug-/treatment-related (6.8%) causes as possible risk factors. Management included splenectomy in 84.1% of cases. As per ASST classification, our patient had moderate–severe injury.³