

Bamlanivimab

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Diffuse C4d staining of peritubular capillaries following off-label use: case report

A 33-year-old man exhibited diffuse C4d staining of peritubular capillaries during off-label therapy with bamlanivimab for COVID-19 [*duration of treatment to reaction onset not stated*].

The man had a history of end-stage kidney disease (ESKD) secondary to hypertensive nephrosclerosis. He had undergone a living-donor kidney transplantation 4 months before the presentation. Following immunosuppression, he received antithymocyte-globulin [thymoglobulin]. His regular immunosuppression regimen included tacrolimus, mycophenolate-mofetil and prednisone. Seven weeks after transplantation, he was diagnosed with COVID-19. In view of high risk status, he started receiving off-label therapy with bamlanivimab [route and dosage not stated] on day 4 after the diagnosis. At that time, the dose of mycophenolate-mofetil was reduced, while dose of other medications remained same. After one month, the dose of mycophenolate-mofetil was increased again. He was advised for a standard 4-month post-transplant visit, which included a surveillance biopsy. He underwent a 4-month surveillance biopsy of the allograft. During routine investigations, immunofluorescence studies showed diffuse linear staining of peritubular capillaries (PTC) (100% of cortical peritubular capillaries) with C4d. Additionally, ACE2 expression in the peritubular capillaries was upregulated in the four-month protocol. Based on his clinical findings, temporal relationship and ruling out other aetiologies, bamlanivimab was considered as cause of diffuse C4d staining of peritubular capillaries. Bamlanivimab might have formed antigen-antibody complexes, which resulted in diffuse C4d staining of peritubular capillaries.

Klomjit N, et al. Diffuse C4d staining of peritubular capillaries in renal allograft following bamlanivimab therapy. *American Journal of Transplantation* 22: 289-293, No. 1, Jan 2022. Available from: URL: <http://doi.org/10.1111/ajt.16783>

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