



Submission No.: PG08-03

Session : Postgraduate Course 8 (Pathology)

Date & Time, Place : November 16 (Thu), 13:00-14:30, Room 5F-2

Session Title : Interesting Biopsy Cases

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## Case 3

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A 55-year-old man with end-stage kidney disease caused by primary FSGS, underwent deceased donor KT in 28th March 2023. He had comorbid hypertension and diabetes, with a daily urine volume before KT being less than 100mL per day. Pretransplant crossmatches were negative for both T and B cells without presence of donor-specific anti-HLA antibodies. Panel-reactive antibody levels were 0% respectively for class I and class II.

During the operation, the patient blood pressure was maintained above 120/70mmHg and no complications were observed. Basiliximab was used for induction, and tacrolimus, mycophenolate, and steroid were used for maintenance immunosuppression.

On POD1, urine volume was good (6L/day) and graft DTPA scan showed no specific abnormalities. Graft sonography also revealed normal appearing echogenicity with normal resistive index in transplant kidney. However, next day, urine volume decreased to 1L/day with some amount of protein. Tacrolimus trough level rose to 19.6mg/dL. On POD3, urine volume was decreased to less than 100mL/day and serum creatinine was gradually increased, so tacrolimus was discontinued and anti-thymocyte globulin was applied. Despite the interventions, anuria was continued, leading to the resumption of hemodialysis on POD4. A graft biopsy was performed on POD7.

We kept stop tacrolimus, but anuria persisted. On POD21. We performed plasmapheresis (PP). Urine volume was gradually increased after PP initiation and hemodialysis was discontinued on POD30. We applied cyclosporine instead of the ceased tacrolimus and kept on steroid and mycophenolate. After 8 sessions of PP, serum creatinine decreased from 11.5 to 1.3mg/dL and proteinuria decreased from 15.3 to 8.7g/g. Two weeks later, however, graft function was decreased and proteinuria persisted with 10g/g, so second graft biopsy was performed on POD68.

Additional 5 sessions of PP were performed and 375mg/1.73m<sup>2</sup> of rituximab was applied twice thereafter.

On 5 months after KT, the patient's creatinine was stable at 1.5mg/dL with UPCR 5.0g/g.