



Not All Blue is Bad – Donor Derived Rhabdomyolysis in a Cadaveric Kidney Transplant

Dear Editor,

A 49-year-old female underwent deceased donor kidney transplantation after being on dialysis for 6 years. The donor was a 29-year-old male who had suffered a road traffic accident. The total warm and cold ischemia times were 2 and 13 hours, respectively. The graft showed bluish discoloration during extraction (donor creatinine: 1.9 mg/dL) [Figure 1a]. Post-operatively, she developed anuria and required seven hemodialysis sessions. Allograft biopsy, done on post-operative day (POD) 5, revealed severe acute tubular injury with myoglobin casts [Figure 1b]. The donor's creatine kinase was not measured, and the recipient's was normal. A repeat biopsy at day 10 revealed resolving acute tubular injury with disappearance of casts. The urine output improved on POD 17, and she was discharged with a serum creatinine of 2.3 mg/dL. She attained normal graft function (creatinine: 1.1 mg/dL) on POD 25. The creatinine is 0.9 mg/dL 13 months post-transplant.

Kidney transplantation from donors with acute kidney injury (AKI) could be considered in preventing organ discards. The causes of discolored kidneys include severe cortical necrosis, massive microthrombi, renal hemosiderosis, melanin/lipofuscin pigment deposits, and rhabdomyolysis.¹ Rhabdomyolysis-related donor AKI may raise concerns regarding renal hypofunction and primary nonfunction. Postulated mechanisms include intratubular myoglobulin casts, afferent arteriolar vasoconstriction, and direct oxidative

damage due to heme-proteins.² Joshi *et al.*³ and Takada *et al.*⁴ reported normal graft function in five patients, after 79 and 24 months of cadaveric transplant, respectively. Optimal donor management with urinary alkalinization and adequate output may achieve excellent long-term graft outcomes, even in anuric or discolored kidneys.

Conflicts of interest: There are no conflicts of interest.

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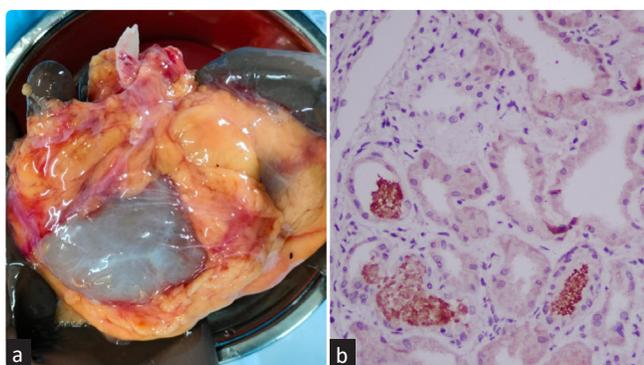


Figure 1: (a) Bluish discoloration at the time of retrieval. (b) Post-operative day 5 biopsy showing myoglobin cast deposition within the tubules. Image courtesy: RENOPATH.