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A Case of Biopsy Proven Rhabdomyolysis Induced Acute Kidney Injury (AKI) in Paediatric Dengue Fever (DF) with Excellent Outcome

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Case Study : Dengue is a common tropical disease with four virus serotypes. The presentation can be varied from asymptomatic to life-threatening shock syndrome. To our best knowledges, there is no previous cases proven biopsy of acute tubular injury with renal myoglobin cast deposition due to rhabdomyolysis associated to DF in Paediatric age group. We present a case of a 10-year-old Malay healthy boy presented with fever, vomiting and lower abdominal discomfort for 4 days and reached hospital in a circulatory collapse state. He has been resuscitated and intubated. He was diagnosed as DF with multiorgan involvement as his serology tests for IgM and IgG were positive supported with pancytopenia, transaminitis, high Creatinine Kinase(CK) level 1986U/L with severe cardiac involvement (Pericardiac effusion, impaired of left ventricular systolic function and high Troponin I 22018ug/L) and neurological impairment (Multifocal cerebral microhemorrhage). He has oliguric acute kidney injury with peak Creatinine 681umol/L and Urea 31.8mmol/L. He did not respond to fluid resuscitation and has low blood pressure supported with 5 inotropic agents including milrinone. He needed Continuous veno-venous hemodiafiltration (CVVHDF) for an initial 6 days followed by intermittent hemodialysis for 2 weeks duration. He received one course of intravenous immunoglobulin and pulse methylprednisolone for presumed rapidly progressing glomerulonephritis. Renal biopsy performed at second week of admission after his thrombocytopenia improved with stable clinical status without any inotropic support. The biopsy finding showed significant acute tubular injury with myoglobin cast supporting the diagnosis of myoglobin cast nephropathy due to rhabdomyolysis. Fortunately, he has fully recovered his kidney and cardiac function with no neurological deficit. In conclusion, this case illustrated a rare complication of DF with proven renal biopsy for Rhabdomyolysis induced AKI. Therefore, monitoring CK in DF should be done to help in early diagnosis and management of the disease.