

## 公募助成「腎不全病態研究助成」研究サマリー

研 究 名	保存期 CKD 症例における脳内酸素動態とヘモグロビン値を含む栄養学的指標の関連について
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<p><b>Background:</b> Dietary management is highly important for the maintenance of renal function in patients with chronic kidney disease (CKD). Cerebral oxygen saturation (rSO<sub>2</sub>) was reportedly associated with the estimated glomerular filtration rate (eGFR) and cognitive function. However, data concerning the association between cerebral rSO<sub>2</sub> and dietary intake of CKD patients is limited.</p> <p><b>Methods:</b> This was a single-center observational study. We recruited 67 CKD patients not undergoing dialysis. Cerebral rSO<sub>2</sub> was monitored using the INVOS 5100c oxygen saturation monitor. Energy intake was evaluated by dietitians based on 3-day meal records. Daily protein and salt intakes were calculated from 24-h urine collection.</p> <p><b>Results:</b> Multivariable regression analysis showed that cerebral rSO<sub>2</sub> was independently associated with energy intake (standardized coefficient: 0.370) and serum albumin concentration (standardized coefficient: 0.236) in Model 1 using parameters with <math>p &lt; 0.10</math> in simple linear regression analysis (body mass index, Hb level, serum albumin concentration, salt and energy intake) and confounding factors (eGFR, serum sodium concentration, protein intake), and the energy/salt index (standardized coefficient: 0.343) and Hb level (standardized coefficient: 0.284) in Model 2 using energy/protein index as indicated by energy intake/protein intake and energy/salt index by energy intake/salt intake in place of salt, protein and energy intake.</p> <p><b>Conclusions:</b> Cerebral rSO<sub>2</sub> is affected by energy intake, energy/salt index, serum albumin concentration and Hb level. Sufficient energy intake and adequate salt restriction is important to prevent deterioration of cerebral oxygenation, which might contribute to the maintenance of cognitive function in addition to the prevention of renal dysfunction in CKD patients.</p>	