

Scrub typhus와 연관된 급성 신손상의 발생률과 위험인자 및 임상적 결과

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The Incidence, Risk factors and Clinical Outcomes of Acute Kidney Injury Associated with Scrub Typhus

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Purpose: Renal involvement of scrub typhus is clinically various from simple urinary abnormalities to acute kidney injury (AKI) leading to death. Predictors to scrub typhus associated AKI were not well known. This study was done to evaluate incidence, predictors, and prognosis of scrub typhus associated AKI according to RIFLE (risk, injury, failure, loss, end-stage kidney disease) criteria.

Patients & methods: We retrospectively evaluated medical records of patients diagnosed as scrub typhus from January 2001 to November 2013 in Gyeongsang National University Hospital.

Results: Male to female ratio was 48:52 and the mean age was 57.9 ± 18.9 years old. Total 510 patients were diagnosed as scrub typhus during above time and AKI incidence was 35.9% in our study. Patients of risk, injury, and failure were 132 (73.4%), 37 (19.8%), and 14 patients (6.8%), respectively. In comparison with patients in non-AKI group, the patients in AKI group were older (73.9 VS 63.4, $p < 0.001$) and had more co-morbidity such as hypertension, diabetes mellitus (DM), and chronic kidney disease (CKD). AKI frequently occurs in patients with HT taking ARB or ACEi ($p = 0.002$) and diabetes which were higher HbA1c values ($p = 0.033$). Hematuria and proteinuria were more frequent in AKI group. There was no positive relationship between severity of proteinuria and occurrence of AKI. More ICU care and death was present in AKI group. Renal function of most AKI patients recovered without sequelae except for one patient who had underlying DM CKD. Multivariate analysis showed that age, presence of CKD, and serum albumin values were independent risk factors for predicting AKI in patients with scrub typhus.

Conclusion: AKI according to RIFLE criteria in patients with scrub typhus is frequent and may lead to death although AKI in scrub typhus is usually mild and renal recovery occurs in most patients. Physician should suspect scrub typhus and start treatment early if patients with acute febrile disease accompanied with AKI were admitted.

Key Words: 쯔쯔가무시병, 급성신부전

Scrub typhus, Acute kidney Injury, RIFLE criteria