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## **Acute kidney injury in patients with severe fever with thrombocytopenia syndrome**

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**Objectives:** Severe fever with thrombocytopenia syndrome (SFTS) is an emerging infectious disease with high case-fatality rate in East Asia. Acute kidney injury (AKI) has been reported in 14~36% of the SFTS virus infected patients, but the risk factor for AKI and clinical outcomes of AKI in patients with SFTS are not well understood.

**Methods:** We retrospectively reviewed health records for all patients who confirmed SFTS virus infection from 2016 to 2020 in Kangwon national university hospital. Their laboratory data, comorbidity, complications and mortality were obtained. AKI was defined according to KDIGO criteria.

**Results:** Of 53 patients confirmed with SFTS infection, AKI developed in 27 (50.9%). The peak stages of AKI were stage 1 in 63.0%, stage 2 in 18.5% and stage 3 in 18.5%. Of these, all of stage 3 patients (18.5%) required renal replacement therapy. AKI was primarily seen in SFTS patients with respiratory failure, with 25.9% of patients on mechanical ventilation developing AKI compared to none of non-ventilated patients. Risk factors for AKI included older age, diabetes mellitus and heart disease. Among all patients, 9 patients (15.1%) died. The AKI group (29.6%) had a higher mortality rate than no AKI group (3.8%), especially more severe AKI (stage 2 and 3, 50%) had higher percentage of mortality compared to stage 1 AKI (17.6%). By cox regression analyses, AKI stage 3 was significant risk factor for mortality after adjusting age and sex.

**Conclusions:** AKI occurs frequently among patients with SFTS. In patients with AKI, the mortality rate is significantly higher than no AKI group, so special attention should be paid when it occurs.