INTRODUCTION AND AIMS: Hypokalemia is a common electrolyte abnormality in clinical practice and is associated with increase all-cause mortality. Hypokalemia is commonly found in patients with urinary tract infection (UTI) in our clinical observation. The aim of the study is access the association of UTI and hypokalemia.

METHODS: We extracted identified patients hospitalized for UTI and the control patients matched for age, gender, comorbidities from the Longitudinal Health Insurance Database 2005. The risk of hypokalemia in the patients hospitalized for UTI in comparison with that in the control patients was analyzed using logistic regression. Inhospital UTI was selected because serum potassium was rarely measured in outpatients and hypokalemia can not be identified.
RESULTS: We analyzed 44952 patients hospitalized for UTI and 44952 matched patients hospitalized for other reasons. 4625 (10.3%) of the UTI patients hospitalized and 2265 (5%) of control patients had hypokalemia (chi-square, p < 0.001). UTI was associated with an increased risk of hypokalemia with an odds ratio (OR) of 2.04 [95% confidence interval CI: 1.94-2.16] in multivariable logistic regression. UTI was associated with higher risk of hypokalemia regardless of the comorbidities and medications in subgroup analysis. The ORs of hypokalemia according to the variables was showed in Figure 1. CKD, diuretics, and beta blocker were associated with lower risk of hypokalemia.

CONCLUSIONS: Urinary tract infection is associated with hypokalemia in patients hospitalized for UTI and this association is independent of comorbidities and medications. The 10% of hypokalemia in the inhospital UTI patients can be underestimated because most clinician did not aware the association.