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## **Postoperative acute kidney injury in patients with advanced chronic kidney disease; Incidence, risk factors**

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**Objectives:** Acute kidney injury (AKI) after surgery is a common complication. The incidence and risk factors of postoperative acute kidney injury in patients with advanced chronic kidney disease are not well known.

**Methods:** We retrospectively analyzed patients older than 18 years who underwent surgery from 2013 to 2018 at Gyeongsang National University Hospital. The exclusion criteria were as follows: (1) eGFR >30 ml/min per 1.73 m<sup>2</sup>, (2) patients receiving renal replacement therapy, or preoperative acute kidney injury, (3) cardiac surgery, urologic surgery, and minor procedural operations. Postoperative AKI was defined as dialysis within 30 days.

**Results:** Of the 47430 patients who underwent surgery at Gyeongsang National University Hospital from 2013 to 2018, we retrospectively analyzed 146 patients who met inclusion criteria.

Postoperative AKI occurred in 33 patients(22.6%). The mean age was 71.3±13.6 years. 13 patients (39.4%) had diabetes mellitus. Preoperative estimated glomerular filtration rate was 16.53±6.6 ml/min/1.73m<sup>2</sup>.

In logistic regression analysis, independent risk factors for AKI were vasopressor use (95% CI, 0.142-0.773, p=0.011), emergency operation (95% CI, 0.051-0.297, p=0.00), hypoalbuminemia (95% CI, 0.114-0.707, p=0.007), preoperative creatinine level (95% CI, 0.123-0.673, p=0.004).

**Conclusions:** In advanced CKD, acute kidney injury requiring postoperative renal replacement therapy were not uncommon. Especially emergency surgery, hypoalbuminemia, high neutrophil to lymphocyte ratio is an independent predictor of AKI.