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## The cumulative detrimental effect of intradialytic hypotension on kidney recovery in patients with acute kidney injury receiving intermittent hemodialysis

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**Objectives :** Acute kidney injury (AKI) requiring kidney replacement therapy is the most severe form of AKI in the ICU setting, resulting in high mortality and poor kidney outcomes. Intermittent hemodialysis (IHD) and continuous kidney replacement therapy (CKRT) do not differ in patient survival, but the impact of intradialytic hypotension (IDH) during IHD on kidney recovery remains undetermined.

**Methods :** We selected individuals who underwent IHD from patients diagnosed with AKI and received kidney replacement therapy at Inha University from 2018 to 2023. IDH was defined as having systolic blood pressure below 90 mmHg or using a vasopressor during IHD sessions and stopping dialysis for any reason. We aimed to analyze only survivors during hospitalization and main outcome was dialysis dependence at discharge.

**Results :** Of a total of 832 patients received kidney replacement therapy due to AKI, 515 patients died, and 171 patients did not undergo IHD. Therefore, 146 patients receiving IHD were included in the main analysis. Median number of IHD sessions were 6.5 (IQR 3-11), and the proportion of IDH per patient was approximately 14%. Of these, 67 patients (45.9%) were dialysis-dependent at discharge. Multivariable logistic regression analyses revealed the number of IHD (as a continuous variable) was a significant predictor for dialysis independence at discharge (OR, 1.89; 95% CI, 1.35-2.66). When the number of IHD was categorized (0, 1, 2, and 3 or more), the risk of dialysis dependence at discharge was increasing with the number of IHD (OR, 2.43, 3.69, and 12.71 for 1, 2, and 3 or more IDH with 0 as a reference).

**Conclusions :** Our study showed that repeated IDH is a strong predictor for dialysis dependence at discharge in patients with AKI. To improve kidney outcomes following AKI, the prevention of IDH during IHD sessions might be crucial.

Figure1.jpg

