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## **The association of vascular access with mortality and hospitalization in Korean incident hemodialysis patients.**

**Gang Jee Ko**<sup>1</sup>, Min Ho Kim<sup>2</sup>, Shin Young Ahn<sup>1</sup>, Ji Eun Kim<sup>1</sup>, Jong Ah Rho<sup>1</sup>, Jin Sun Kim<sup>1</sup>, Eun Jung Cho<sup>1</sup>, Young Joo Kwon<sup>1</sup>

<sup>1</sup>Department of Internal Medicine-Nephrology, Korea University Guro Hospital, Korea, Republic of

<sup>2</sup>Department of Convergence Medicine, Ewha Womans University School of Medicine, Korea, Republic of

### **Objectives:**

The importance of vascular access as a lifeline in hemodialysis patients has been known well. Although preparedness of vascular access before initiation of hemodialysis is recommended, it is not always possible in real world practice. We aimed to investigate current practice pattern of access creation among Korean incident hemodialysis patients.

### **Methods:**

Study data were collected from the Korea National Health Insurance Claims Database of the Health Insurance Review and Assessment Service. Patients who initiated hemodialysis between September 1<sup>st</sup>. 2012 and August 31<sup>st</sup>. 2017 in Korea were included. Catheter insertion and vascular access creation data using procedure code were also collected.

### **Results:**

Total 27,968 incident hemodialysis patients were enrolled. Catheter was the most prevalent access at the initiation of hemodialysis (22,292, 79%), and it is converted to arteriovenous fistula/graft (AVF/AVG) later in 12,573 patients. Patients who only used catheter showed worse mortality compared to other groups, and the risk of hospitalization and cost of care were also high in catheter only group. Mortality in patients who had conversion from catheter to AVF/AVG were similar compared to patients who used AVF/AVG initially. But, the risk of hospitalization, cost of care and the risk of angioplasty were lower in latter group. Positive report for regular vascular access monitoring by physical examination was associated with lower risk of frequency of angioplasty.

### **Conclusions:**

Although the importance of preparedness vascular access has been known, it was not applied to current clinical practice well. Lower risk of mortality, hospitalization, and angioplasty with reduced cost of care were demonstrated in patients who prepared vascular access at the initiation of dialysis.