

## 투석 환자의 혈관접근로 종류에 따른 생존률 분석

강원대학교 의과대학 내과<sup>1</sup>, 경북대학교 의과대학 내과<sup>2</sup>, 연세대학교 의과대학 내과<sup>3</sup>  
가톨릭대학교 의과대학 내과<sup>4</sup>, 전남대학교 의과대학 내과<sup>5</sup>  
서울대학교 의과대학 내과<sup>6</sup>, 서울대학교 보라매병원 내과<sup>7</sup>

박지인<sup>1</sup>, 이정표<sup>7</sup>, 김용림<sup>2</sup>, 강신욱<sup>3</sup>, 양철우<sup>4</sup>, 김남호<sup>5</sup>, 김연수<sup>6</sup>, 임춘수<sup>7</sup>

### The Impact of Vascular Access Type on the Survival in the Incident Hemodialysis Patients: Comparisons Among Arteriovenous Fistula, Graft and Temporary Catheters

Ji In Park<sup>1</sup>, Jung Pyo Lee<sup>7</sup>, Yong-Lim Kim<sup>2</sup>, Shin-Wook Kang<sup>3</sup>, Chul Woo Yang<sup>4</sup>  
Nam-Ho Kim<sup>5</sup>, Yon Su Kim<sup>6</sup>, Chun Soo Lim<sup>7</sup>

Department of Internal Medicine<sup>1</sup>, Kangwon National University College of Medicine  
Department of Internal Medicine<sup>2</sup>, Kyungpook National University School of Medicine  
Department of Internal Medicine<sup>3</sup>, Yonsei University College of Medicine  
Department of Internal Medicine<sup>4</sup>, The Catholic University of Korea College of Medicine  
Department of Internal Medicine<sup>5</sup>, Chonnam National University Medical School  
Department of Internal Medicine<sup>6</sup>, Seoul National University College of Medicine  
Department of Internal Medicine<sup>7</sup>, Seoul National University Boramae Medical Center

**Background:** Though arteriovenous fistula (AVF) is the preferred vascular access for hemodialysis, some of end-stage renal disease (ESRD) patients inevitably start dialysis via central venous catheter (CVC). We aimed to investigate the relationships between hemodialysis vascular access and all-cause mortality in a large prospective cohort.

**Methods:** A total of 1461 patients who newly initiated hemodialysis and had available data for the first vascular access were prospectively enrolled between August 2008 and September 2014. The initial vascular access type were classified into AVF, arteriovenous graft (AVG), and CVC. The access type which was investigated 3 months or 12 months after dialysis was considered as permanent vascular access for each patient. The primary outcome was all-cause mortality and the secondary outcome was all-cause hospitalization.

**Results:** Among 1461 patients, we identified 314 patients who started hemodialysis via AVF, 76 via AVG, and 1,071 via CVC. Compared among three groups, patients with AVG were older, showed higher rate of diabetic ESRD, higher rate of comorbidities including cerebrovascular disease and peripheral vascular disease. The portion of early referral to nephrologist was higher in the order of AVF>AVG>CVC. In the Kaplan-Meier analysis, patients with AVF or AVG showed significantly better survival compared with patients with CVC ( $p=0.015$ ). The number of annual hospitalization were not different among the groups. The permanent access data was available in 856 patients which were divided into 703 patients with AVF and 153 with AVG. The survival was better in patients with AVF than patients with AVG ( $p<0.001$ ). The number of annual hospitalization was higher in the AVG group (0.75 vs. 1.08,  $p=0.023$ ) which had .

**Conclusions:** AVF and AVG group showed better survival compared to CVC group in a large prospective cohort study in Korea. AVF and AVG should be preferred as an access for hemodialysis, and early referral might facilitate it.

**Key Words:** 혈액투석, 혈관접근로, 생존률  
Hemodialysis, Vascular access, Survival