

## 노인 혈액투석 환자의 혈관통로 선택

서울대학교병원 내과

배은진, 김효진, 박지인, 한승석, 이하정, 김동기, 김연수, 주권욱

### Vascular Access Choice in Elderly ESRD Patients

Eunjin Bae, Hyo Jin Kim, Ji In Park, Han Seung Seok, Hajeong Lee  
Dong Ki Kim, Yon Su Kim, Kwon Wook Joo

Internal Medicine, Seoul National University Hospital

**Background:** Arteriovenous fistula (AVF) is the preferred vascular access for hemodialysis (HD). The number of elderly ESRD patients is progressively increasing. However, elderly patients may have lower rates of surgical vascular access compared with younger patients due to risks of higher co-morbidities, surgical complications. The aim of our study is to evaluate optimal choice for vascular access in elderly ESRD patients.

**Method:** All outpatient in Seoul National University Hospital vascular access clinic between January 1, 2008 and december 1, 2013 were analyzed retrospectively. We divided the patients in 3 groups by age (<65 yrs, 65-79 yrs, ≥80 yrs) and Cox proportional hazard models were used to analyze the effect of vascular access type (radiocephalic (R-C) AVF vs. brachiocephalic (B-C) AVF vs. arteriovenous graft) on maturation failure, access failure and all-cause mortality.

**Result:** Total of 1,113 patients were analyzed (61.7±14.6 years; 59.1% male; 87.4% AVF vs. 12.6% AVG; 5.0% access failure rate; 15.0% mortality). In very elderly group (≥ 80yrs), mortality rate, access formation rate in the Lt. upper arm, rate of AVG, rate of PTA, preoperative surveillance rate were higher than young age group (<65 yrs). AVG was a significant predictor of all-cause mortality (HR, 4.513; 95% CI, 1.750-11.637; p=0.002) and the R-C AVF has lowest adjusted HR compared with the other vascular access type (R-C AVF [reference], B-C AVF, HR, 1.981; 95% CI, 0.760-5.163; p=0.007) in elderly group. The adjusted HRs for graft failure and maturation failure were lower in B-C AVF than R-C AVF in elderly group even after adjusted by age, sex, vintage, underlying disease (DM, HTN, malignancy, heart failure, coronary artery disease, cerebrovascular disease, peripheral vascular disease), cause of ESRD, experience of PTA or operation, hemoglobin, calcium, phosphorus, albumin.

**Conclusion:** We concluded that an AVF is the preferred form of vascular access for long term outcome. In addition, B-C AVF could be considered by individual patient characteristics in elderly patients who has complicated R-C site and a short life expectancy. Further prospective studies are warranted to validate these findings.

**Key Words:** 혈관통로 실패, 사망률, 노인

Vascular access failure, Mortality, Elderly