

Prevention of arteriovenous fistula nonmaturation

*Young ok KIM

Nephrology, The Catholic University of Korea, Korea, South

Arteriovenous fistula (AVF) is still the best vascular access for hemodialysis because of fewer complications and better long-term patency compared to arteriovenous graft (AVG) and central venous catheter. “Fistula First strategy” has increased incidence of AVF operation by performing preoperative vascular mapping but paradoxically AVF maturation decreased and consequently incidence of primary AVF failure and use of catheter increased. Risk factors has been known to be epidemiologic factors such as old age, female sex, diabetes mellitus, and vascular factors such as small sized or arteriosclerotic artery and vein, congestive heart failure, and correctable factors such as late referral, preoperative vessel injury, poor surgical skill, early cannulation. Therefore effort to increase AVF maturation is very important in patients who undergoing new AVF operation. First, early referral to a nephrologist help arm venous preservation before the beginning of dialysis therapy. This venous preservation increases AVF maturation. Predialysis care including including referring physicians, HD nurses, nephrologists, and vascular surgeon is needed. Preoperative and postoperative isometric arm exercise increase arterial and venous diameter and AVF diameter, finally AVF blood flow. Effort for selection of adequate vessel for AVF creation by using preoperative mapping can increase AVF maturation. After the AVF operation, vascular access monitoring and surveillance, and timely interventional treatment of stenotic AVF also increase AVF maturation.