Patients in the United States frequently initiate hemodialysis with a central venous catheter (CVC) and subsequently undergo placement of a new arteriovenous fistula (AVF) or arteriovenous graft (AVG). Little is known about the clinical and economic effects of initial vascular access choice” Al-Balas et al (2017).

Abstract:

Patients in the United States frequently initiate hemodialysis with a central venous catheter (CVC) and subsequently undergo placement of a new arteriovenous fistula (AVF) or arteriovenous graft (AVG). Little is known about the clinical and economic effects of initial vascular access choice. We identified 479 patients starting hemodialysis with a CVC at a large medical center (during 2004-2012) who subsequently had an AVF (n=295) or AVG (n=105) placed or no arteriovenous access (CVC group, n=71).

Compared with patients receiving an AVG, those receiving an AVF had more frequent surgical access procedures per year (1.01 [95% confidence interval, 0.95 to 1.08] versus 0.62 [95% confidence interval, 0.55 to 0.70]; P<0.001) but a similar frequency of percutaneous access
procedures per year. Patients receiving an AVF had a higher median annual cost (interquartile range) of surgical access procedures than those receiving an AVG ($4857 [$2523-$8835] versus $2819 [$1411-$4274]; \( P<0.001 \)), whereas the annual cost of percutaneous access procedures was similar in both groups. The AVF group had a higher median overall annual access-related cost than the AVG group ($10,642 [$5406-$19,878] versus $6810 [$3718-$13,651]; \( P=0.001 \)) after controlling for patient age, sex, race, and diabetes. The CVC group had the highest median annual overall access-related cost ($28,709 [$11,793-$66,917]; \( P<0.001 \)), largely attributable to the high frequency of hospitalizations due to catheter-related bacteremia. In conclusion, among patients initiating hemodialysis with a CVC, the annual cost of access-related procedures and complications is higher in patients who initially receive an AVF versus an AVG.

Reference:


Thank you to our partners for supporting IVTEAM