

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).

ReTweet if useful... What is the economic impact of vascular access device selection for hemodialysis <https://ctt.ec/LHfPa+> @ivteam #ivteam

Click To Tweet

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:

Al-Balas, A., Lee, T., Young, C.J., Kepes, J.A., Barker-Finkel, J. and Allon, M. (2017) The Clinical and Economic Effect of Vascular Access Selection in Patients Initiating Hemodialysis with a Catheter. *Journal of the American Society of Nephrology*. July 14th. .

doi: 10.1681/ASN.2016060707.

Thank you to our partners for supporting IVTEAM