

Physician - Vascular Access

[MSB-01]

Patency and Effectiveness of Vascular Access For Hemodialysis Patients: A Descriptive Study

Ferit Cetinkaya¹, Ayşe Taş²

¹Department of Cardiovascular Surgery, Gebze Medicalpark Hospital, Kocaeli, Türkiye

²Department of Public Health, Adıyaman University Faculty of Medicine, Adıyaman, Türkiye

Türk Gogus Kalp Dama 2024;32(Suppl 2):MSB-01

Doi: 10.5606/tgkdc.dergisi.2024.msb-01

E-mail: cetinkaya1234@gmail.com

Received: July 04, 2024 - Accepted: September 29, 2024

Objective: The study aimed to reveal the infection rates of permanent catheters and the thrombosis, maturation time, and patency rates of arteriovenous fistulas according to the regions in the arm in dialysis patients.

Methods: The study included a total of 109 arteriovenous fistulas and nine permanent catheters of 75 dialysis-dependent patients with chronic kidney disease from six different dialysis centers. Arteriovenous fistulas were examined in three groups according to their location in the forearm: distal radiocephalic, proximal radiocephalic, and brachial regions.

Results: Among those undergoing dialysis with a permanent tunneled catheter (PTC; n=9), 77.8% (n=7) used a PTC by choice, while 22.2% (n=2) used it due to heart failure instead of an arteriovenous fistula. Of the participants, 66.7% (n=50) used at least one PTC in their lifetime; 6% of these patients experienced a PTC infection, while 44% had a thrombosed fistula. Among all patients, 66 of the fistulas were patent, and 43 were thrombosed. Of these patients, 41.3% had a thrombosed distal radiocephalic fistula, 2.7% had a thrombosed proximal radiocephalic fistula, and 8.0% had a thrombosed brachial fistula. No relationship was found between the number of thrombosed fistulas and smoking, obesity, sex, or chronic diseases. The maturation time of arteriovenous fistulas was on average 38 days. Those under the age of 65 had shorter maturation times compared to those over the age of 65 ($p<0.05$).

Conclusion: Approximately half (41.3%) of dialysis-dependent patients had a thrombosed distal radiocephalic fistula. The maturation time of arteriovenous fistulas increases with age. There was no statistically significant difference in maturation times among distal radiocephalic, proximal radiocephalic, and brachial arteriovenous fistulas.

Keywords: Arteriovenous fistula, catheter, chronic renal failure, dialysis, permanent.

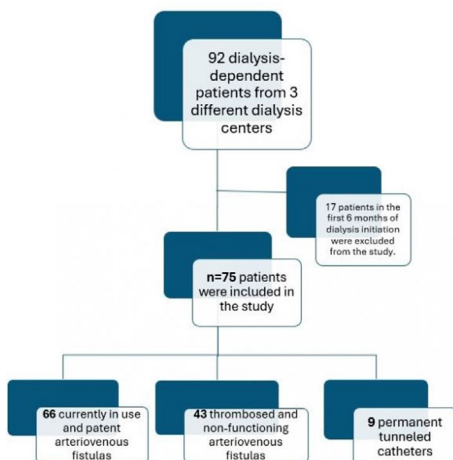


Figure 1. Flowchart of the study.

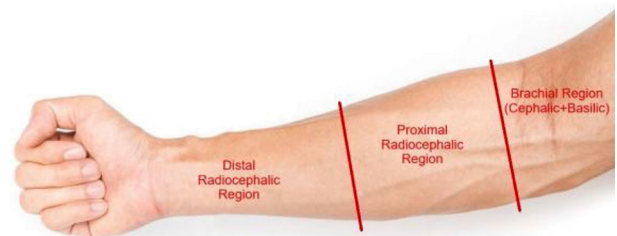


Figure 2. Fistula regions on the forearm.

References

1. Huijbregts HJ, Bots ML, Wittens CH, Schrama YC, Moll FL, Blankestijn PJ, et al. Hemodialysis arteriovenous fistula patency revisited: Results of a prospective, multicenter initiative. *Clin J Am Soc Nephrol* 2008;3:714-9. doi: 10.2215/CJN.02950707.
2. Obialo CI, Conner AC, Lebon LF. Maintaining patency of tunneled hemodialysis catheters--efficacy of aspirin compared to warfarin. *Scand J Urol Nephrol* 2003;37:172-6. doi: 10.1080/00365590310008938.
3. Neuen BL, Gunnarsson R, Baer RA, Tosenovsky P, Green SJ, Golledge J, et al. Factors associated with patency following angioplasty of hemodialysis fistulae. *J Vasc Interv Radiol* 2014;25:1419-26. doi: 10.1016/j.jvir.2014.05.020.