

Characteristics and outcome of arteriovenous fistula creation in unplanned dialysis patients

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ABSTRACT

Introduction: Arteriovenous fistula (AVF) is the gold standard for vascular access in hemodialysis (HD). However, in cases of unplanned dialysis, uncuffed internal jugular catheters (IJC) are often used as temporary measure. This study explores the patterns and outcomes of AVF creation among patients who underwent unplanned dialysis at our center. **Materials and Methods:** We performed a retrospective cohort study of patients who undergoing unplanned dialysis through uncuffed IJC, chose HD as their long-term kidney replacement therapy at HSIS Serdang between January 2022 and December 2022. Data were collected through EHIS over one-year period and analyzed using SPSS Statistics 26.0. **Results:** The study comprised 87 patients with the mean age of 53 ± 13.4 years. Of these, 60 patients (69%) underwent AVF creation, including brachiocephalic fistulas (36%), radiocephalic fistulas (29%), and brachiobasilic fistulas (4%). The mean duration from referral to AVF creation was 48 ± 46 days. The in-house vascular team performed 41 procedures (68%), with a waiting period of 63 ± 53 days. The outsourcing program handled 13 cases (22%), achieving a mean waiting time of 20 ± 7 days, while private centers managed 6 cases (10%) with a waiting period of 39 ± 15 days. Notably, 27 patients (31%) did not have AVF creation; 21% experienced mortality and 9% were deemed unsuitable due to vessel conditions. The overall success rate for AVF creation was 56%, with the highest success rate observed in the outsourcing program. 3% of patients had second AVF creation within a year. **Conclusion:** Despite AVF being the preferred vascular access for HD, many patients with unplanned dialysis started HD through uncuffed IJC before AVF could be created. Addressing this issue involves increasing public awareness of chronic kidney disease and implementing early kidney life plan discussions. Expanding AVF outsourcing programs also shows potential in improving creation rates and outcomes.