

COMPARISON OF OUTCOMES BETWEEN UPPER ARM BRACHIOCEPHALIC VERSUS TWO STAGE BRACHIOBASILIC ARTERIOVENOUS FISTULA

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BACKGROUND: According to the Kidney Disease Outcomes Quality Initiative (KDOQI) guidelines arteriovenous fistula (AVF) should be the access of choice in patients who need hemodialysis. The relative durability and functionality of upper arm brachiocephalic (BC) vs. a two stage upper arm brachio basilic (BB) AVF remains uncertain.

METHODS: Retrospective study of consecutive patients who underwent BB or two stage BC in a single institution. Fisher's exact test was used to categorical variables, Kaplan-Meier analysis was used to compare patency rates, and Cox proportional hazards model was used to analyze factors related to fistula failure.

RESULTS: Outcomes were available for 106 patients who underwent BC (n = 65) and BB (n = 41) AVF. Baseline demographics, comorbid conditions, and preoperative history of dialysis access were comparable between groups with the exception of diabetes mellitus, which was more frequent in the BC group (40 vs. 78%, $p < 0.001$). There was no significant difference in the thirty day mortality, wound complications, maturation, and time to maturation between the groups. Mean follow-up was 18 +/- 7.8 months. Primary patency at 1 year of follow up was 70 vs. 85% ($p = 0.06$), whereas the primary assisted patency at 2 years was 55% vs. 73% ($p = 0.05$) for the BC and BB groups respectively. Re-intervention was necessary in 20 and 9% ($p = 0.12$) of patients in the BC and BB groups.

CONCLUSION: Compared to the BC group, there is a trend for better patency in patients undergoing a two stage BB AVF for hemodialysis, that persists after 2 years. Reintervention to assure AVF functionality is also more common in the BC group.