

Abstract

Arterio-Venous Fistulas Made by Nephrologist - A Single Center Experience

Mahendra A¹, Seema B², Vivek D²

¹Bhopal Memorial Hospital & Research Center, Raisen Bypass Road, Karond, Bhopal (Mp), India. Zip-462038.

²Resident, Department of Nephrology.

Introduction:

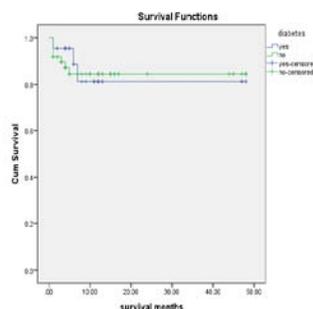
The population of chronic kidney disease (CKD) patients requiring dialysis (Stage-V d) is on rise. Nephrologists being the primary physician of CKD patients should involve in planning and creation of Arterio-Venous fistula (AVF). Here we report the single center outcome of AVFs made by nephrologist.

Material and methods:

We retrospectively analyzed the outcome of AVFs made by single Nephrologist at our center, during April- 2010- April 2012. Final analysis was done in June 2012. All AVFs made, were side to side, radio-cephalic, with ligation of distal end of anastomosed vein. Preoperative assessment for successful AVF was done by clinical methods only i.e. Allen's test and vein percussion test. All were made under local anesthesia in a facility near dialysis unit. Prophylactic anticoagulation was not used. Statistical analysis was done by spss 20. Primary patency rates at one and two years were calculated by Kaplan-Meier analysis. It was censored for patients who died with working AVF. Secondary patency rates were not calculated as none of the AVFs underwent radiological intervention.

Results:

A total of seventy six, AVFs were made, of these seventy one were taken into final analysis. Five were excluded from study because of failure at two weeks. Mean age of the patients was 48.2+/-13.9 years. Females accounted 25.3% (18/71) and 30.9% (22/71) were diabetics. Average time to first cannulation was 4 weeks. Primary patency rate for non diabetic patients is 84.5% at 12 and 24 months with mean survival of 40.9 +/- 2.4 months [95% confidence interval (CI) of 36 - 45.7 months]. Diabetic patients has slightly inferior primary patency rate of 81.3% at 12 and 24 months (P=0.02), and mean survival of 39.9+/-4.2 months (95% CI 31.6-48.3). All fistulas provided adequate blood flow of >250ml/minute. Complications occurred were accidental posterior wall venotomy, injury to superficial branch of radial nerve and wound infection in one patient each. None of the patients developed hemorrhage, steal syndrome, aneurysms or venous hypertension in the limb during followup. Fig-1. Survival graph.



Discussion and Conclusion:

Autogenous AVFs made by nephrologists in carefully selected patients provide excellent short term patency rates at 2 years, in patients of CKD with and without diabetes. Various authors have reported secondary patency rates of 75-80% for distal AVFs at two years (Reilly et al and Burger et al). More and more nephrologist should take up this procedure to perform.