Abstract

Permanent Vascular Access (Arterio-Venous Fistula) — A Nephrologist's Experience (Retrospective Study)

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Introduction:

Vascular access, especially permanent, is a pre-requisite for good quality Hemodialysis (HD). An Arterio-venous Fistula (AVF) should be constructed at a minimum of 3-6 months prior to the expected start of HD. Who is the best person to perform this procedure – A Vascular surgeon, Urologist or a Nephrologist, that's debatable!

I as consultant Nephrologist practicing in Karachi, Pakistan, has been performing AVF surgery for the past 24 years. This is a retrospective study for the year 2009 of my experience of performing AVF on ESKD patients. There is a total of 330 patients included in the study. In total 327 AVFs were made, of which 180 were males and 150 were females. The location of the AVF was Radio-Cephalic (side-side) at the wrist and mid forearm. Also Brachio-Cephalic (side-side) at the cubital fossa.

Most surgeons perform AVF anastamosis as End-Side, but I prefer Side-Side anastamosis. In this study, I aimed to note the complications that were seen after the AVFs were made which included Infections, Rupture and Clotting/ Blockage of the AVF.

Methods:

All the patients diagnosed as cases of ESKD coming in the OPD for consultation for AVF were included in the study. This is a retrospective study. The patients were clinically examined for vessel size and structure, but in few cases the help of Doppler Ultrasound was used to identify the caliber of the vessels. Side to side arterio-venous anastamosis was done using Polypropylene 6/0 sutures in continuous fashion.

Results:

Total No. of AVF constructed: 330, Radio-cephalic at wrist 130, at mid forearm 111, Brachiocephalic at Cubital fossa 89. The Complications noted were Clotting (06), Burst of AVF (03), Infection (01). Arterial calcifications was observed in 49 cases and Procedure Failure in 03 due to poor vessels.

Discussion & Conclusion:

Majority of the patients presented for AVF construction after the start of Hemodialysis and thus may have had damaged vasculature due to recurrent I.V Cannulation and/or Double Lumen Catheter placements. It's strongly recommended that the patients be counseled for earlier AVF constructions. Nephrologists should be encouraged and trained to construct AVFs.