

Surgical Salvage of Failed Radiocephalic Arteriovenous Fistula by Proximal Radiocephalic Anastomosis

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Background: Radiocephalic wrist arteriovenous fistula (RCAVF) is the primary and best option for vascular access for hemodialysis treatment.

Aim of the study: The aim of this work is to evaluate new proximal radiocephalic anastomosis as a surgical salvage procedure for failed functioning radiocephalic arteriovenous fistula whether due to juxta-anastomotic stenosis or thrombosis.

Material and methods: A prospective study was done on 46 patients (21 males and 25 females) with chronic renal failure who had failed RCAVF due to juxta-anastomotic stenosis (n=16) and thrombosis (n=30). The diagnosis was made clinically and by arterial and venous Duplex examination. The repair was performed using a new proximal radiocephalic anastomosis in all cases. The patients were followed up for 18 months. Patency following surgical intervention was estimated with the Kaplan-Meier method.

Results: Patients' age ranged from 18 to 70 years with a mean age of 44 ± 12 years. The technical success rate was 100%. Successful utilization was achieved in 93.5%, i.e. 100% (16/16) for stenosed and 90% (27/30) for thrombosed arteriovenous fistulas (AVFs). The time needed to use AVF after surgical proximal neoanastomoses ranged from one week to four weeks. Primary patency of the neoanastomoses after 3, 6, 9, 12, 15 and 18 months were 89%, 80.4%, 78.3%, 73.9%, 67.4% and 63%, respectively. There was no statistically significant difference in the primary patency of the neoanastomosis between those performed for stenosed and thrombosed fistulas (P = 0.486).

Conclusion: In our experience, in patients with failed functioning radiocephalic arteriovenous fistulas whether due to juxta-anastomotic stenosis or thrombosis and have a suitable cephalic vein proximal in the forearm we can salvage the failed fistula by proximal neoanastomosis with excellent technical success, early utilization, low complications and suitable primary patency.