INTRODUCTION: Forearm grafts take place in haemodialysis access if autogenous fistula at wrist cannot be created or failed. Two types are usually applied: the cephalic and the loop-shaped cephalic. The objective of the present study was to evaluate the long-term patency and rate of complications of straight and loop PTFE forearm arteriovenous grafts.

METHODS: Between January 2005 and December 2008, 147 patients with ESRD referred from the Department of Vascular Surgery of the Erbani general hospital in Baghdad were surgically treated with forearm PTFE AV grafts. Patients were divided into two groups: Group A, the straight grafts (n=59) and Group B, the loop grafts (n=88). Follow-up times ranged from 6 to 36 months with a mean of 15 months. All patients were informed regarding the procedure and subsequently operated on. The follow-up period ranged from 16 to 18 months.

RESULTS: The two groups were matched for age, sex, diabetes, and number of prior access procedures. Significantly fewer straight grafts were successfully used for dialysis: 69.0% vs. 90.4% (P=0.001). One- and two-year primary patency rates were 93.8% vs. 67.4% and 43.8% vs. 46.0%, respectively, for straight and for looped (P=0.57; log rank). There was no significant difference in secondary patency (P=0.58). However, complications including postoperative hematoma, upper limb swelling, stenosis, and pain were significantly higher in the straight graft group (62.3% vs. 6%). For plasma-phenomones, the results were 167.3 vs. 31.0 ml.

CONCLUSIONS: Although brachiocephalic loop grafts are more liable to postoperative hematoma, swelling, stenosis of the upper limb but they showed better primary and secondary patency rate than straight radio-arterial grafts and nearly equal in dialysis blood flow efficiency of dialysis.

Patients and methods: We identified every patient undergoing his or her first surgical procedure for vascular access in our center between January 2005 and December 2008. Vascular surgery was performed on all patients included in our study, and the follow-up was done in the vascular surgery outpatient clinic. Patients who had undergone previous dialysis access surgery were excluded. The study included 147 patients, including 92 men and 55 women, with a mean age of 31.6 years (range: 12-78 years). All patients underwent a complete preoperative evaluation, including physical examination, laboratory tests, and imaging studies (computed tomography or ultrasound). A detailed history was taken, and patients were counseled regarding the procedure and its potential complications. The primary outcome measure was primary and secondary patency rates. Secondary patency was defined as the time from the primary surgery to the last successful surgical intervention or death. The primary patency rate was defined as the time from surgery to failure or intervention.