Management of failed infrainguinal arterial bypass surgery

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Methods: a non-comparative, prospective study done on 21 patients at Ain Shams University hospitals between August 2014 to August 2016. According to each consultant’s own choice, all patients had undergone one or two of the following procedures: secondary bypass, catheter-directed thrombolysis, native superficial femoral artery angioplasty, patch angioplasty, surgical thrombectomy. Additionally, each patient had a completion angiography done at the end of the procedure with concomitant angioplasty either proximal of distal or anastomotic or within the graft. Patients were followed up for 2 years using ankle-brachial index pressures, symptomology and wound care.

Results: of total 21 patients, 6 cases underwent secondary bypass 50% achieved fully functioning conduits, and other 50% died postoperatively. Native total SFA angioplasty and stenting was done in 4 cases, all cases had fully patent grafts. CDT was used in 4 cases, one patient maintained full graft patency, one had an AKA due to re-occlusion, 2 cases experienced graft re-occlusion with improvement in symptoms on antithrombotic medication. Surgical thrombectomy was done primarily in 8 cases, 4 cases experienced fully patent grafts, 2 cases of re-occlusion with subsequent AKA, and 2 cases with mortality. 72.7% of cases, who achieved fully patent grafts, had it done to correct inflow or outflow disease.

Conclusion: One of the best is a secondary bypass as it has better patency (but less than the initial bypass). Another contemporary successful approach is native SFA angioplasty and stenting. Intraoperative completion angiography and angioplasty of the anastomosis or proximal or distal native arteries, assisted in the fair patency rates, but still have inferior results regarding patency to secondary bypass and native SFA angioplasty.