**Introduction:**

The initial therapy for a stenosis in an arteriovenous fistula is radiological fistuloplasty. A major concern however is the longevity of this effect. There are limited data available regarding clinical factors predicting outcome after fistuloplasty.

**Methods:**

A single centre, retrospective analysis was performed for 123 consecutive haemodialysis patients undergoing clinically indicated angioplasty of dysfunctional arteriovenous fistulae, to examine factors associated with access circuit patency. Primary patency was lost when there was any radiological or surgical intervention in the access circuit, or when the access circuit was abandoned. Cumulative patency was lost when the access circuit was abandoned. Follow-up was at least one year for all patients. Variables associated with primary and cumulative patency were pre-specified and assessed using both un-adjusted (univariate) and adjusted Cox proportional hazards models. Analysis was repeated for a subgroup of 79 patients with a single lesion only in order to examine the effect of stenotic lesion characteristics on patency.

**Results:**

Factors found to have a significant association with poorer outcomes included fistula age, thrombosis at the time of intervention, and a history of previous intervention. Non-white ethnicity, lesion length and site were also significant predictors, with central and swing point lesions associated with accelerated loss of patency.

**Conclusions:**

These findings aid decision making when considering radiological intervention and for planning future vascular access.