Background: The natural history of fibromuscular dysplasia (FMD) has not been clearly described.

Methods: Vascular events, revascularization procedures, and outcomes are reported for the first 302 patients (pts) enrolled in the FMD registry from 7 U.S. sites.

Results: 91.4% were female (mean age at diagnosis 51.5 + 14.3 years). Hypertension occurred in 72.2% (mean age of onset 43.4 + 15.9 years). Headaches were common (63.7%) and daily in 13.7%. The prevalence of vascular events is shown below. No deaths were reported during median follow-up from date of diagnosis of 24 months. 46.4% (140/302) of pts underwent at least 1 therapeutic procedure [balloon angioplasty (52.9%) with stenting (20.4%), arterial bypass surgery (11.1%), or other (15.6%)] with renal artery (67.6%), extracranial carotid (16.5%), celiac/mesenteric (6.0%), and intracranial carotid (3.3%) artery procedures most common. The most frequent procedural indications were hypertension, aneurysm, and dissection. Procedural success was reported in 82.4% of procedures with symptomatic improvement in 50.2% and complication(s) in 7.6% of procedures.

Conclusions: FMD is a morbid condition but mortality was low in the short period of follow up. Dissection, TIA, or stroke occur frequently and dissections and aneurysms may involve multiple vascular beds. Nearly half of the pts required invasive therapeutic procedures with a high technical success rate.