



## Vascular Disease

### PERIPHERAL ARTERY DISSECTION IN PATIENTS WITH FIBROMUSCULAR DYSPLASIA: A REPORT FROM THE UNITED STATES FIBROMUSCULAR DYSPLASIA PATIENT REGISTRY

ACC Oral Contributions

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**Background:** Fibromuscular dysplasia (FMD) is a disease of medium-sized arteries that may lead to stenosis, occlusion, dissection or aneurysm. It is not known why some patients with FMD develop a peripheral artery dissection while others do not.

**Methods:** The characteristics of patients who experienced an arterial dissection were compared to those who did not among patients enrolled in the United States FMD registry from 9 U.S. centers.

**Results:** Of the 447 patients entered into the FMD registry, 88 (19.7%) had a dissection of a peripheral artery [carotid (68%), renal (22%), vertebral (18%), mesenteric (7%) and other arteries (6.1%)]. Twenty percent of patients had more than one dissection with a maximum of 3. The differences between those patients with and without dissection are shown in the Table.

	Dissection No. (%)	No Dissection No. (%)	p-value
	88/447 (19.7)	359/447 (80.3)	
Age at diagnosis of FMD (Years + SD)	48.4+/-9.6	52.7+/-14.1	0.0012
Female	73/88 (83)	331/356 (93)	0.0033
Family history of sudden death	21/60 (35)	39/243 (16.1)	0.0019
Hypertension	51/88 (58)	271/359 (75.5)	0.0014
Systolic BP on presentation (Mean+ SD)	123.9+/-18.2	131.7+/-20.2	0.0072
Headache	56/75 (74.7)	160/285 (56.1)	0.0036
Hemispheric TIA	19/88 (21.6)	38/359 (10.6)	0.011
Stroke	19/88 (21.6)	22/359 (6.1)	<0.0001
Horner's syndrome	23/88 (26.1)	9/359 (2.5)	<0.0001
Carotid and/or Vertebral Artery FMD	75/88 (85.2)	188/332 (56.6)	<0.0001
Renal Artery FMD	55/88 (62.5)	239/322 (72)	0.09

**Conclusion:** FMD patients who developed a peripheral artery dissection were younger, had lower blood pressure, yet more frequent headaches, and were less likely to be female when compared to FMD patients without dissection. In addition, the dissection group has a significantly higher likelihood of having carotid artery FMD and experiencing a TIA or stroke. Further research is needed to determine why some FMD pts develop a peripheral artery dissection and others do not.