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PHYSICAL EXAMINATION FINDINGS IN FIBROMUSCULAR DYSPLASIA: A REPORT OF THE UNITED STATES REGISTRY FOR FIBROMUSCULAR DYSPLASIA

ACC Moderated Poster Contributions

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Session Title: Peripheral Vascular Disease: State of Science II

Abstract Category: 35. Peripheral Arterial/Carotid Disease/Aortic Disease

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Background: The frequency of physical examination (PE) findings among patients (pts) with fibromuscular dysplasia (FMD) has not been reported.

Methods: PE findings are reported for the first 447 pts enrolled in the FMD registry from 9 U.S. centers.

Results: Mean age at the time of enrollment was 55.7 +13.1 years (range 18-86 years) and 91% of pts were female. Mean BMI was 25.5 + 5.2 kg/m² and 48.8% of patients had a BMI > 25 kg/m². Mean blood pressure on enrollment was 130/75 + 20/12.4 mmHg and 77.9% of pts were taking at least one blood pressure medication. 60% of pts reported significant headaches and 27.5% had pulsatile tinnitus. A cervical or epigastric bruit was a presenting sign that led to FMD diagnosis in 22.2% and 9.4% of pts, respectively. A neurological and vascular PE was recorded at the time of enrollment in 92.6% (414/447). Findings suggestive of Horner's syndrome (pupil abnormality or ptosis) were reported in 12.4% of pts. Cranial nerve abnormalities were reported in 9.4% and other focal neurological deficits were reported in 13.6%. Bruits were reported over the carotid arteries (30.5%; 18.1% bilateral), epigastrium (17.5%), and flanks (6.1%; 3.2% bilateral). Among pts with reported imaging of the extracranial circulation (carotid and vertebral) and a documented PE, sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of carotid bruit in predicting extracranial carotid FMD were 45.4%, 93.7%, 95.4%, and 37.4%, respectively. The sensitivity, specificity, PPV and NPV of epigastric and/or flank bruit in predicting renal and/or mesenteric FMD were 24.0%, 93.3%, 92.6%, and 26.0%, respectively.

Conclusions: Abnormal PE findings are prevalent in FMD. Carotid and abdominal bruits have low sensitivity but high specificity in indicating extracranial cerebrovascular or visceral involvement. In the appropriate clinical setting (e.g. middle aged female with hypertension, headaches, or pulsatile tinnitus) vascular bruits may indicate the presence of FMD.