Teaching NeuroImage: Multifocal Single Vessel Cerebrovascular Fibromuscular Dysplasia

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A 39-year-old diabetic male with history of right-eye amaurosis fugax, presented with recurrent episodes of left-sided weakness. MRI Brain revealed chronic infarcts in the right fronto-parietal lobe. Conventional cerebral angiogram showed moderate to severe stenosis of the entire right internal carotid artery with diffuse beaded appearance highly suggestive of Fibromuscular Dysplasia (FMD) (Figure). MR Angiography of the chest, abdomen and pelvis was normal. He was initiated on Aspirin 100 mg once daily with strict control of diabetes mellitus and dyslipidemia. FMD is a rare idiopathic non-atherosclerotic, non-inflammatory vasculopathy affecting the musculature of small and medium sized arteries primarily leading to stenosis and occasionally arterial dissection, aneurysms and tortuosity.\textsuperscript{1,2} Atypical features in our patient included male gender and isolated multifocal cerebrovascular FMD with predominant intracranial involvement.
REFERENCES:


FIGURE: Symptomatic multifocal single vessel cerebrovascular Fibromuscular Dysplasia

(A) MRI Brain T2 FLAIR sequence showed chronic infarcts in the right frontoparietal region;
(B) Sagittal view of CTA head and neck demonstrated moderate to severe stenosis of the entire right internal carotid artery cervical segment soon after its origin. (white arrow). (C, D, E) Anteroposterior and lateral views on digital subtraction angiogram of right internal carotid artery showed alternate stenosis and dilatation of extracranial segment (black arrow) and cavernous-supraclinoid segments (white arrow), suggestive of “beading” typical of FMD.
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