

## IMAGES IN HYPERTENSION

# Fibromuscular Dysplasia of Renal Artery

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## ABSTRACT

Fibromuscular dysplasia (FMD) of the renal artery is one of the etiological factors of secondary hypertension. The etiology is unknown. Conventional radiography is ideal when interventional methods are planned. The beaded appearance is the typical appearance of FMD on angiogram.

**Keywords:** Fibromuscular dysplasia, Idiopathic, Nonatherosclerotic.

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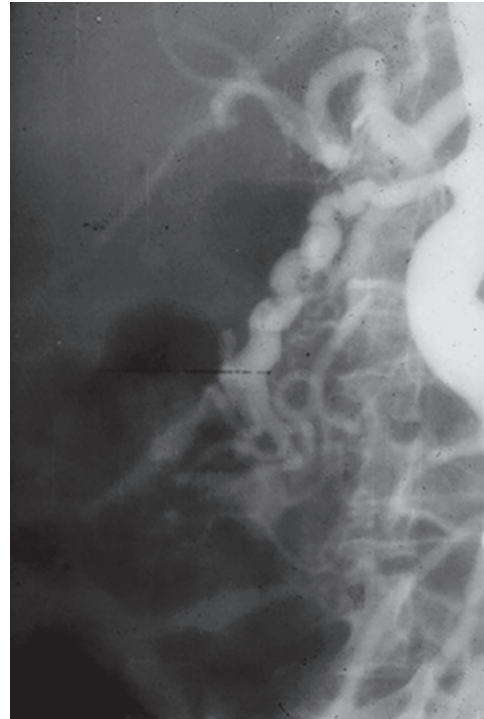
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**Conflict of interest:** None

## INTRODUCTION

A 35-year-old female was diagnosed with new-onset hypertension. Due to significant elevation in blood pressure and her age, the possibility of "secondary" hypertension was considered.<sup>1,2</sup> Work-up revealed unilateral right renal artery stenosis due to fibromuscular dysplasia (FMD). The angiogram shown in Figure 1 is the typical appearance of FMD. For reasons not firmly known, FMD is more common in women than in men. Hormonal etiology may be a factor but not established. Fibromuscular dysplasia of renal arteries should be suspected in women with new onset or severe hypertension. The condition responds favorably to percutaneous transluminal angioplasty.<sup>3-5</sup>

Fibromuscular dysplasia is an idiopathic, segmental, noninflammatory and nonatherosclerotic disease that can affect all layers of both small and medium caliber arteries. The exact etiology is not known and the pathophysiology is vague. This occurs predominantly in young women of child-bearing age and is often unilateral. It may be familial. Routine laboratory investigations are usually nonproductive, but in long-standing cases, renal impairment may be noted. Pathologically, FMD is classified into three main types: Intimal, medial, and adventitial. Conventional radiography may not be helpful. Color



**Fig. 1:** Typical appearance of FMD

ultrasonography is helpful but it is not good for management. Computed tomography and magnetic resonance imaging are quite helpful. Conventional angiography is ideal in case interventional methods are to be adopted.<sup>3,6-8</sup>

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