Title
MR angiography of midaortic syndrome

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CLINICAL IMAGE

MR angiography of midaortic syndrome

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A 12-year-old boy presented with hypertension and intermittent lower extremity claudication. Breath-hold high spatial resolution MRA at 3.0 T (gradient recalled echo sequence; 10 ml of Magnevist) revealed abdominal aortic coarctation (Fig. 1, *thin long arrow*), severely narrowed right renal artery and atrophy of the ipsilateral kidney (Fig. 1b, *arrowhead*), and hypertrophied inferior mesenteric artery (Fig. 1a, *thick short arrow*) feeding the superior mesenteric artery (Fig. 1a, *thin short arrow*) through the arc of Riolan (Fig. 1a, *arrowhead*). The child had previously undergone placement of an aorto-aortic graft (Fig. 1, *thick long arrow*).

Midaortic syndrome (MAS) is a rare disease caused by segmental narrowing of the abdominal or distal descending thoracic aorta associated with concomitant stenoses involving the renal (63%) and visceral (33%) arteries [1]. MAS can be congenital or acquired caused by giant cell or Takayasu arteritis, retroperitoneal fibrosis, Williams syndrome, fibromuscular dysplasia, neurofibromatosis, and mucopolysaccharidosis [1, 2]. Noninvasive diagnosis is made by MRA or CT angiography [2]. Surgical bypass grafting is the optimal method of treatment [1].

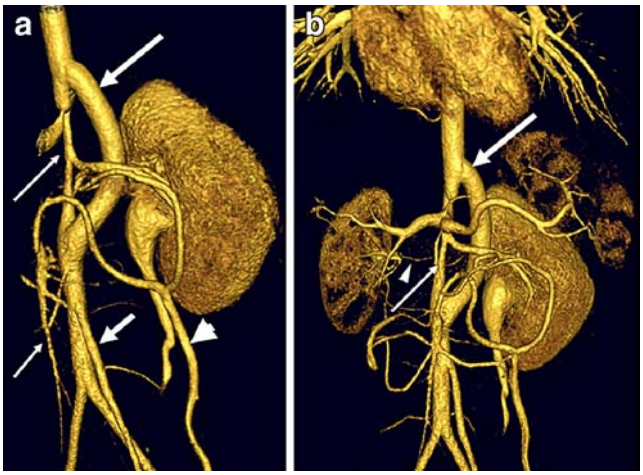

Fig. 1 3-D volume-rendered MR angiograms (Vitrea 3.6; Vital Images, Minneapolis, MN)

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