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Images in Cardiology: The “Ribbon Sign” of Aortic Coarctation

CHUN-YAO HUANG, M.D.,* CHAO-HUNG LAI, M.D.,* SHING-JONG LIN, M.D. PH.D.,*† JAW-WEN CHEN, M.D.*†

From the *Division of Cardiology, Department of Internal Medicine, Taipei Veterans General Hospital and †National Yang-Ming University School of Medicine, Taipei, Taiwan

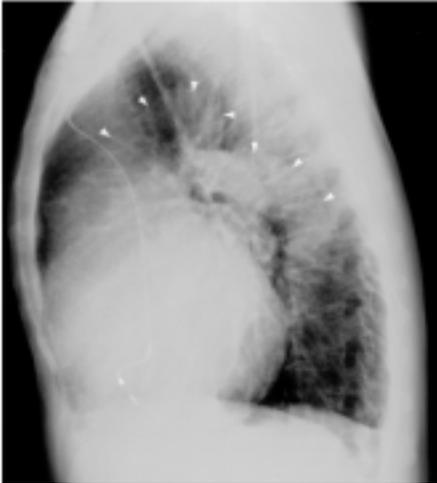


FIG. 1 The “ribbon” appearance of aortic coarctation.

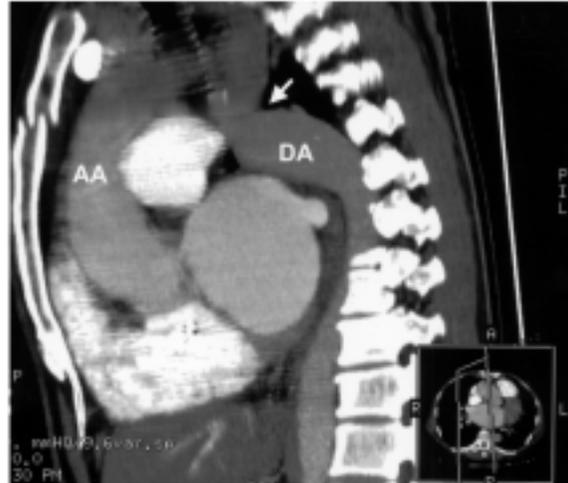


FIG. 2 Three-dimensional chest computed tomography showed coarctation of aorta. AA = ascending aorta, DA = descending aorta.

A 56-year-old man with a VDD pacemaker that had been implanted 4 years previously for complete atrioventricular block was admitted for his exacerbating congestive heart failure. Chest roentgenogram in the lateral view (Fig. 1) showed the obviously tortuous, dilated aorta and a zag over the site of coarctation (arrowhead), giving the “ribbon” appearance. The ribbon sign is not seen on the anterior-posterior view and is different from the conventional “3 sign,” that results from prestenotic and poststenotic dilatation of the aorta. Reconstructed three-dimensional chest computed tomography showed coarctation of the aorta (Fig. 2, arrow) on sagittal section. Aortography from the right lateral view showed an eccentric coarctation of the aorta (Fig. 3, large arrow). In addition, dilated great vessels arising from the aortic arch and collateralization of the stenosis (small arrows) are shown; a systolic pressure gradient of 67 mmHg across the coarctation was present. The mean life span of patients with aortic coarctation is 35 years. Thus, few patients are old enough to have the tortuous aorta resulting in a ribbon sign. For the 23 patients who were newly diagnosed with aortic coarctation on admission in our hospital in the last 10 years, only three older patients (ages 48, 56, and 60) showed the “ribbon sign” on the chest roentgenogram.



FIG. 3 An eccentric coarctation of the aorta was shown on aortography (right lateral view). Abbreviations as in Figure 2.