A Case with Endocardial Cushion Defect and Horseshoe Kidney

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Dear Sir,

In this study we describe a case of horseshoe kidney in association with the endocardial cushion defect.

A 33-year-old male was admitted to hospital for hypertension. Six years ago he had been hospitalized for lead intoxication. He was working in a storage battery. At that time bradycardia was detected. Cardiac investigation showed a congenital endocardial cushion defect. He had an Autime 2 model dual chamber pace maker implanted. He was treated 4 times for lead intoxication after wards. Finally he stopped actively working with lead. Two years ago at his latest admission hypertension was found but he did not regularly take medicine for hypertension. Physical examination revealed a pulse of 76/min, blood pressure of 190/130 mm Hg, 3/6 holosystolic murmur in the mesocardiac and apical region. Laboratory examinations were as follows: hematocrit 48%, WBC 4,800/mm³, platelet count 200,000/mm³, BUN 20 mg/dl, glucose 90 mg/dl, Na 139 mEq/l, K 4.7 mEq/l, alkaline phosphatase 88 IU/l, AST 54 IU/l, ALT 27 IU/l, uric acid 5.2 mg/dl, Ca 8.8 mg/dl, P 3.2 mg/dl, creatinine clearance 98 ml/min; proteinuria was negative, urine sediment was normal. Telecardiography disclosed cardiomegaly and pacemaker image. Left ventricular hypertrophy and pacemaker rhythm were determined on electrocardiography. With the echocardiographic examination a perimembranous ventricular defect and a primum atrial septal defect were found (fig. 1). A rapid-sequence intravenous pyelogram and renal computerized tomography disclosed a horseshoe kidney. Enalapril maleate (10 mg/day) was started. Follow-up hypertension was controlled with enalapril maleate.

Fig. 1. Apical four-chamber view of the patient with cushion defect showing the perimembranous ventricular septal defect (VSD) and primum atrial septal defect (ASD). He had been followed for 2 years and blood pressure and cardiac and renal function were stable.

Horseshoe kidney is a relatively common condition (1 in 400 of the population). Two kidneys fuse across the midline, most commonly at the lower poles. Other developmental abnormalities such as Turner's syndrome or Trisomy 18 accompany the horseshoe kidney, [1]. No chromosomal abnormality was found in our patient. In the literature renal and cardiac abnormalities together such as Down syndrome and renal dysplasia, multiple renal cysts and

Ehlers-Danlos syndrome and Kaufman syndrome with heart disease and bifurcation of renal pelvis or ureteral ectasia have been reported [3]. Huber et al. [2] have found three cases of abdominal aortic aneurysm in association with a horseshoe kidney. We presented here a case of a horseshoe kidney in association with an endocardial defect.

References

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