Aortic root dissection

Sir,

I read with interest the article which described early systolic closure of the aortic valve in two cases of aortic root dissection (*Br Heart J* 1980; 43: 579–81). The brief discussion of the cases in which early systolic closure of the aortic valve occurs mentions patients who had discrete subaortic stenosis, mitral regurgitation, and intraventricular septal defects. I did not see septal hypertrophy listed in the causes of early systolic closure of the aortic valve. To my knowledge, this is probably the most common cause of early systolic closure of the aortic valve.¹ The description of the patients' clinical course and laboratory data did not indicate if these patients had a thickened septum. The echocardiograms presented in the paper showed only the aortic root and did not illustrate the septal or posterior wall and I am unable to determine if in fact hypertrophic cardiomyopathy was present. It seems to me, therefore, that it is possible that these two patients may have had concomitant hypertrophic cardiomyopathy and aortic regurgitation which would have led to the above noted echocardiographic findings.

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Reference

- 1 Feigenbaum H. *Echocardiography*. 2nd ed. Philadelphia: Lea and Febiger, 1976: 160.

This letter was shown to Dr J Candell-Riera who replies as follows:

Sir,

Hypertrophic cardiomyopathy is the most common cause of "mid-systolic closure" of the aortic valve but not of "early systolic closure". As Krajcer *et al.*¹ have shown, the closure of the aortic cusps in hypertrophic cardiomyopathy occurs later than in discrete subaortic stenosis (0.14 ± 0.04 s versus 0.05 ± 0.01 s from the opening point). Moreover, in combined idiopathic hypertrophic subaortic stenosis and discrete subaortic stenosis two separate partial closure motions of the aortic cusps can be registered, as Hagaman *et al.*² have recently described. In our two reported cases of aortic root dissection the partial aortic closure recorded in the echocardiogram was very premature (less than 0.05 s from the opening point) and for this reason we did not discuss the differential diagnosis from hypertrophic cardiomyopathy. Besides, no other signs of hypertrophic cardiomyopathy (asymmetrical hypertrophy or systolic anterior motion of the mitral valve) were recorded.

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References

- 1 Krajcer Z, Orzan F, Pechacek LW, García E, Leachman RD. Early systolic closure of the aortic valve in patients with hypertrophic subaortic stenosis and discrete subaortic stenosis. Correlation with preoperative and postoperative hemodynamics. *Am J Cardiol* 1978; 41: 823–9.
- 2 Hagaman JF, Wolfe C, Craige E. Early aortic valve closure in combined idiopathic hypertrophic subaortic stenosis and discrete subaortic stenosis. *Am J Cardiol* 1980; 45: 1083–7.