

Dissecting aortic aneurysm diagnosed by echocardiography

Sir:

I would like to comment on a recent article in the *British Heart Journal* (1974) 36, 111, by Yuste, Aza, Minguez, Cerezo, and Martinez-Bordin. Echocardiography has been useful in diagnosing dissecting aortic aneurysms; though our experience at this time is extremely limited.

Normally the walls of the aorta move in a parallel manner, and in aortic root dissection this parallelism between the separated walls is maintained. In Fig. 2a, the anterior wall (AW) is not moving parallel to the posterior wall (PW). The separated walls are out of phase. Normally when the aortic valve opens both walls of the aorta start to move anteriorly and continue to do so for a while after the aortic valve closes. The structure labelled AW moves in this pattern. However, the structure labelled PW moves posteriorly during ventricular systole and does not have the motion pattern of the aortic wall. This may represent a large pericardial effusion due to fluid in the transverse sinus of the pericardium or may be an obscure non-parallel linear echo in the left atrial cavity. In any case, a false lumen may be present anteriorly but has not been demonstrated satisfactorily posteriorly.

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References

- Kronzon, I., and Mehta, S. S. (1974). Illustrative echocardiogram. Aortic root dissection. *Chest*, 65, 88.
Nanda, N. C., Gramiak, R., and Shah, P. M. (1973). Diagnosis of aortic root dissection by echocardiography. *Circulation*, 48, 506.

This letter was shown to Dr. Yuste who replies as follows:

Sir:

Previous reports on echocardiographic patterns in dissecting aortic aneurysm have shown the walls of the aorta moving in a parallel way. Subsequent to our case report, three further cases studied in our laboratory showed these findings. The dissected walls moved in opposite directions in our published case; yet the angiographic study in the right anterior oblique position demonstrated an undoubted pattern of anterior and posterior aortic dissection proved at operation.

It seems that even when the apparent anterior and posterior walls of the dissected aortic root are found not to move in a parallel manner, this fact should not exclude a dissection. The possibility, however, of an effusion in the transverse sinus of the pericardium must be ruled out echocardiographically by obtaining a complete left ventricle-mitral valve area-aortic root sweep performed with a strip chart recorder.

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