occlusion. This would affect the nature of myocardial ischemic insult and therefore the clinical presentation. I thank Bahr for raising these very interesting questions.

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References

Color Doppler Diagnosis of Left Ventricular Pseudoaneurysm

Simultaneous with the report of Roelandt et al. (1), we described the two-dimensional Doppler color flow mapping and color-guided continuous wave Doppler features of a left ventricular pseudoaneurysm (2). Similarly, color Doppler demonstration of flow through a communication suspected by two-dimensional echocardiography was diagnostic of pseudoaneurysm. Color-guided continuous wave Doppler examination in the three cases of Roelandt et al. (1) revealed a "characteristic flow pattern" across the communication. They observed flow into the pseudoaneurysm during pre-ejection and early to mid systole with an early systolic peak velocity (1.9 to 1.9 and 2.16 m/s, respectively) and reversed flow in late systole and early to mid diastole with an early diastolic peak velocity (1.7 and 1.27 m/s, respectively). By contrast, we observed holosystolic flow into the pseudoaneurysm with an early systolic peak velocity of 4 m/s and reversed holodiastolic flow with an early diastolic peak velocity of 2.2 m/s. Restricted left atrial filling due to compression by a huge pseudoaneurysm in our case, and differences in ventricular function, communication size and location and pseudoaneurysm compliance, may explain the different flow velocity patterns. Characterization of flow patterns across the communication requires further observations.

The cases of Roelandt et al. (1) and our own illustrate the advantages of Doppler color flow imaging. Doppler color flow imaging superimposes color-encoded flow signals on two-dimensional echocardiographic images in near real time. Simultaneous imaging of cardiac structure and spatially oriented blood flow allows rapid identification of a ventricular wall communication, detection of small and multiple communications and accurate delineation of communication size and concomitant flow abnormalities. Doppler color flow imaging enhances the accuracy, efficiency and confidence of two-dimensional echocardiography in diagnosing left ventricular pseudoaneurysm and facilitates recognition of this disorder.

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References

Reply

We thank Natello and Nanda for their comments regarding our report on the diagnosis of left ventricular pseudoaneurysm with use of Doppler color flow imaging and integrated continuous wave Doppler studies. We have also read their report (their Ref. 2) with interest. We are in total agreement with their comments on the value of Doppler color flow imaging in the diagnosis of left ventricular pseudoaneurysm.

The one area of divergence between the two reports is the characterization, by continuous wave Doppler study, of the velocity flow profile at the neck of the pseudoaneurysm. We accept that differences in the position of the pseudoaneurysm and differences in left atrial and left ventricular function may affect the pattern of flow between the left ventricle and the pseudoaneurysm.

We would recommend that future studies on the Doppler velocity flow profiles in left ventricular pseudoaneurysm should be directed by Doppler color flow imaging and include both pulsed and continuous wave Doppler examinations.

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