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Various Expressions of Coronary Doppler Patterns of Myocardial Bridging

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A 52-year-old man diagnosed with hypertension was presented to our hospital with chest pain. An electrocardiogram, chest X-ray and laboratory test revealed normal findings. Coronary angiography showed normal coronary anatomy with severe milking phenomenon of the mid-portion of the left anterior descending coronary artery (LAD) due to myocardial bridging (MB). In transthoracic echocardiography (TTE), the color Doppler of the distal LAD (Fig. 1A, arrow) was observed and moreover, a characteristic feature of the coronary Doppler that is different from the normal coronary Doppler (Fig. 1B) was detected (early diastolic flow acceleration, a mid diastolic deceleration and a plateau, the 'finger-tip' phenomenon) (Fig. 1C, arrow). These characteristic coronary Doppler patterns can be commonly found with TTE, and they are slightly different to each other from the early diastolic peaking 'finger-tip appearance' (Fig. 1C and D, arrows) to the splitting pattern of diastolic flow (Fig. 1E and F, arrows) in many patients with MB.

Coronary Doppler in MB began to appear in the 1990s using intravascular ultrasound and angiography.[1-3] Recently, TTE enables us to assess the coronary Doppler more easily; further, there are many various features in the coronary Doppler pattern of MB.[4)5)] We gathered various cases of Doppler patterns of MB with noninvasive TTE. To the best of our knowledge, this is the first report that clearly shows the various patterns of coronary Doppler in MB using TTE. Coronary Doppler evaluation with TTE can reveal characteristic features of MB noninvasively.

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• The authors have no financial conflicts of interest.

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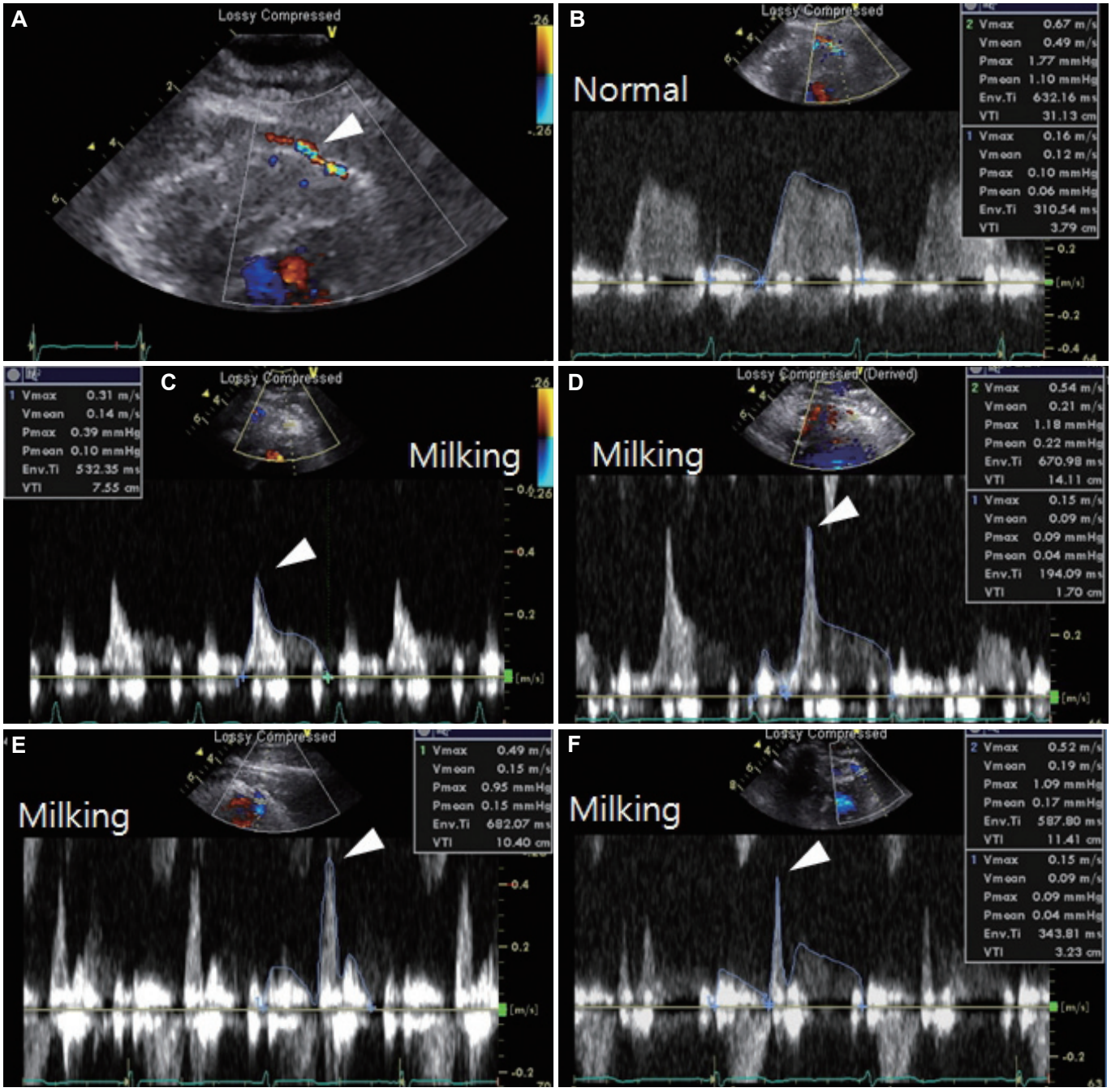

Fig. 1.

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