Augmented Mechanical Alternans after Premature Ventricular Contraction

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A 66-year-old man was resuscitated from out-of-hospital cardiac arrest due to dilated cardiomyopathy. Echocardiography showed an end-diastolic diameter of 59 mm and ejection fraction of 35%. Eight days later, cardiac catheterization was performed. When the left ventricular pressure was recorded with a pig-tail catheter, mechanical alternans (1), which is a phenomenon of alternating strong and weak beats with a constant beat-to-beat interval, was found (Picture 1). The pressure gradient between strong and weak beats was 20 mmHg during sinus rhythm. This pressure gradient increased to 80 mmHg after premature ventricular contraction (PVC), and gradually decreased. Asterisks show weak beats.

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