



Letter to the Editor

Mechanical Stimulation of the Left Ventricle as a Temporizing Life Sustaining Maneuver

To the Editor:

A patient with a history of mildly reduced ejection fraction and coronary artery disease status post coronary artery bypass surgery with subsequent percutaneous coronary intervention presented with pneumonia and anemia. His troponin was mildly elevated, and he was referred for cardiac catheterization after medical treatment of his comorbidities. His baseline electrocardiogram demonstrated trifascicular block with a prolonged PR interval, right bundle branch block, and left anterior fascicular block. During the placement of the pigtail catheter in his left ventricle, the patient developed complete heart block without a ventricular escape rhythm. Assuming the catheter traumatized the left posterior fascicle, a brief period of time was allowed to see if he would recover. He did not, and while external pacing pads were being prepared, the left ventricle was mechanically stimulated at a rapid rate with the pigtail catheter inside the left ventricular cavity.

This mechanical stimulation induced premature ventricular contractions (PVCs) and thus myocardial contraction. This mechanical stimulation was

performed at a rate of approximately 80 beats per minute for several minutes. During the entire time, the patient remained alert and communicative with a normal blood pressure. After the external pads were applied and he was transcutaneously paced, the pigtail was removed from the left ventricle and a temporary transvenous pacemaker was inserted into the right ventricle in a much more stable environment.

Although, complete heart block is very rare during catheter insertion into the left ventricle, the clinician should remember that manual induction of PVCs by the same catheter, or even a guidewire (personal communication with Dr Joseph Cytron), can be lifesaving. I present this case so that future cardiac interventionalists can remember this potentially lifesaving procedure.

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