

Reply to the Editor— Leftward on left anterior oblique is not always septal!



We appreciate the interesting comments made by Drs Contractor and Cooper.

We agree that using fluoroscopy to confirm septal placement of right ventricular pacing leads is notoriously difficult. Placement of pacing leads in the inferoseptal or anteroseptal junction, or the right ventricular free wall, appears to be a mechanism for perforation in many cases. Although a computed tomography scan is helpful, lead imaging artifact can make it difficult to evaluate the exact location of the lead. In our case, at surgery, the lead location was confirmed below the left anterior descending artery (LAD) and exiting from the free wall of the left ventricle.

We felt that given the location of the lead perforation and relatively young age of the patient, an open surgical approach would be the safest and most controlled option. After opening the sternum and visualizing the lead exiting the left ventricle lateral to the LAD we felt our approach was prudent. While a nonoperative approach may have been feasible, the potential for bleeding or injury to the LAD could have resulted in a fatal outcome. Our patient was discharged home with no adverse events on postoperative day 4.

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To the Editor— Treatment of asystole caused by vagal nerve stimulator



We read with great interest the case report by Ratajczak and colleagues¹ of late-onset asystolic episodes in a patient with a vagal nerve stimulator that were successfully treated by pacemaker implantation.

In this particular case, excessive iatrogenic parasympathetic stimulation of the cardiac conduction system with the vagal stimulator was presumed to be the mechanism of bradyarrhythmias. A variety of different clinical conditions could result in similar cardioinhibition as a result of

endogenously enhanced parasympathetic tone, such as cardioinhibitory syncope, carotid sinus syndrome, and ictal asystole. Pacemaker implantation is a viable treatment option in such cases. However, complications rates due to a pacemaker during long-term follow-up are not low, ranging from 7.5% to almost 10% of patients. In addition, chronic pacing of the right ventricle could be detrimental to cardiac function.²

Cardioneuroablation is an emerging option for treatment of cardioinhibitory neurocardiogenic syncope, with promising long-term results.³ This minimally invasive technique is based on radiofrequency ablation of the main epicardial parasympathetic ganglia in the heart, with the aim of modifying the abnormally enhanced cardiac vagal tone. Using this ablation procedure in our center, we successfully treated a patient with ictal asystole and were able to convert the patient's dramatic seizures with severe cerebral hypoperfusion to short focal seizures with minimal motor sign. Therefore, we strongly believe that cardioneuroablation also could be considered in the presented case.

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We thank Drs Antolic and Zizek for their thoughtful review of our case report on the use of a permanent pacemaker in a patient with late-onset asystolic episodes related to use of a nerve stimulator.¹

Cardioneuroablation is a new technology in which the autonomic ganglion in the left atrium is targeted for denervation as a treatment for neurally mediated syncope, asystolic, and postictal syncope. The data are limited, based on small observational studies and case reports^{2–5}; no randomized controlled trial has been completed yet.

Alteration in autonomic function can lead to deleterious effects on the heart, such as arrhythmias and sudden cardiac death, which are unknown in this patient population.