A 63-year-old patient developed right ventricular failure and intermittent complete heart block after an acute dissection of the right coronary artery. An emergency bypass surgery did not prevent right heart failure. Initially bridged with an extracorporeal membrane oxygenation, a HeartWare Ventricular assist device was implanted into the right ventricle. During the patient’s recovery phase, an intermittent complete atrioventricular (AV) block was observed. A dual-chamber pacemaker was implanted endovascularly. The ventricular lead was implanted into a posterolateral vein of the coronary sinus instead of the right ventricular cavity. The figure displays a fluoroscopy image during pacemaker implantation. The arrow indicates the ventricular lead. The atrial lead is implanted at the right atrial wall. Implantation of the ventricular lead into the coronary sinus prevents fatal entrapment within the cannula of the right ventricular assist device (RVAD) during or after implantation.

A complete AV block after massive right ventricular infarction is commonly seen within this patient population. An implantation of an RVAD with placement of the cannula close to the apex complicates and endangers positioning of the pacemaker lead. In this case, this problem was solved by utilizing the coronary sinus for implantation site.

The full-length version of this report can be viewed at: http://www.escardio.org/communities/EHRA/publications/ep-case-reports/Documents/dual-chamber-pacemaker-implantation.pdf.