

Clinical Use of Capsule Endoscopy in a Patient with Cardiac Pacemaker

Sir,

A 79-year-old woman with deep vein thrombosis was referred for evaluation of the source of the obscure gastrointestinal bleeding by capsule endoscopy (CE) before anticoagulant therapy. She had iron deficiency anemia, which necessitated transfusions (approximately 2 units per month). Her hemoglobin level was 82 mg/L, whereas her mean corpuscular volume was 72 fL. The results of the investigations for the source of the obscure gastrointestinal bleeding were negative, including esophagogastroduodenoscopy and colonoscopy. Her past medical history included arrhythmia and atrioventricular block. A cardiac pacemaker (Biotronik, Talos DR, bipolar, DDDR mode, Germany) was inserted, due to atrioventricular block, about two and a half years ago. We did not observe any adverse events when we carried out the CE procedure in our patient with implanted cardiac pacemaker. In addition, we did not find any technical abnormalities or interference with the capsule endoscopic images.

The US Food and Drug Administration and the manufacturers, Given Imaging and Olympus, recommend not to use CE in patients with cardiac pacemakers and implantable cardioverter defibrillators (ICDs).^[1] Several studies and case reports about interference between pacemakers and ICDs have been published.^[1-4] Interference between CE and telemetry (eg, artifacts, impossibility to document CE images) has been reported to occur in two cases in a retrospective study.^[2] Furthermore, CE appears to be safe in patients with pacemakers or ICDs without the use of telemetry.^[3] No adverse events were found in any of the two patients (one adult and one pediatric patient) with abdominal pacemakers during CE.^[4] CE was performed for obscure gastrointestinal bleeding in 97% of the patients with a pacemaker and in all patients with ICDs.^[1]

In our experience and based on the literature, the clinical use of CE appears to be safe in patients with cardiac pacemaker or ICDs.

Osman Ersoy, Ebru Akin¹, Aylin Demirezer¹

Department of Gastroenterology, Yildirim Beyazit University,
Faculty of Medicine, ¹Ankara Atatürk Education and Research
Hospital, Bilkent, Ankara, Turkey
E-mail: oersoy@yahoo.com.tr

REFERENCES

1. Bandorski D, Jakobs R, Brück M, Hoeltgen R, Wiczorek M, Keuchel M. Capsule endoscopy in patients with cardiac pacemakers and implantable cardioverter defibrillators: (Re) evaluation of the Current State in Germany, Austria, and Switzerland 2010. *Gastroenterol Res Pract* 2012;2012:717408.
2. Bandorski D, Lotterer E, Hartmann D, Jakobs R, Brück M, Hoeltgen R, *et al.* Capsule endoscopy in patients with cardiac pacemakers and implantable cardioverter-defibrillators: A retrospective multicenter investigation. *J Gastrointest Liver Dis* 2011;20:33-7.
3. Cuschieri JR, Osman MN, Wong RC, Chak A, Isenberg GA. Small bowel capsule endoscopy in patients with cardiac pacemakers and implantable cardioverter defibrillators: Outcome analysis using telemetry review. *World J Gastrointest Endosc* 2012;4:87-93.
4. Dirks MH, Costea F, Seidman EG. Successful videocapsule endoscopy in patients with an abdominal cardiac pacemaker. *Endoscopy* 2008;40:73-5.

Access this article online

Quick Response Code:



Website: www.saudijgastro.com

DOI: 10.4103/1319-3767.118139