


IMAGES IN ELECTROPHYSIOLOGY

‘Green light’: watch it twice...

Serge Boveda*, Rui Providência, and Stéphane Combes

Département de Rythmologie, Clinique Pasteur, 43–45 avenue de Lombez, 31076 Toulouse, BP 27617 Cedex 3, France

* Corresponding author. Tel: +33 5 62 21 16 45; fax: +33 5 62 21 16 41, E-mail: s.boveda@clinique-pasteur.com

In Panel A you can see how the green rectangle and the ‘No Alert’ message (black arrows) of the welcoming screen are falsely reassuring in this completely pacemaker-dependent patient (red arrow) implanted with an Identity SR (St Jude Medical®) device. This is in disagreement with the announced tension value (2.66 V) and the estimated longevity (0.5 year). When the battery status is checked, we can confirm that the generator has to be urgently replaced because of nearly exhaustion impedance value of 14.3 kΩ (dotted arrow, Panel B).

Therefore, caution is always recommended even when facing a green light!

Comment provided to the authors by St Jude Medical:

‘We want to emphasize that the longevity gauge is not a representation of total battery capacity nor should it be considered a ‘fuel gauge’. In Photon/Epic (+)/Atlas(+)/Epic II/Atlas II and Identity/Victory/Zephyr devices, the gauge is based on battery voltage (in volts). The battery voltage gauge rundown is non-linear and will fluctuate based on changes in the programmed settings, percent pacing, and high-voltage charging. Assuming a constant current drain, there are periods in a pacemaker or implantable cardioverter-defibrillator battery’s life in which the voltage drops relatively quickly and other periods where the voltage remains relatively constant. Depending on the circuitry and battery chemistry, using battery voltage alone to represent the remaining capacity may give an unreliable picture of the remaining longevity. For the newer Current/Promote/Unify/Fortify/Ellipse and Accent/Anthem devices, the gauge is based on remaining longevity (in years), not battery voltage’.

Conflict of interest: S.B. is a consultant for Boston Scientific and Medtronic. R.P. is a consultant for Sorin.

Published on behalf of the European Society of Cardiology. All rights reserved. © The Author 2013. For permissions please email: journals.permissions@oup.com.