

'Smart' solutions for paroxysmal atrial fibrillation?

Peer-reviewed author version

GRIETEN, Lars; VANDENBERK, Thijs & NUYENS, Dieter (2017) 'Smart' solutions for paroxysmal atrial fibrillation?. In: EUROPACE, 19(7), p. 1108-1108.

DOI: 10.1093/europace/euw164

Handle: <http://hdl.handle.net/1942/24352>

'Smart' solutions for paroxysmal atrial fibrillation?

Lars Grieten^{1,2*}, Thijs Vandenberk^{1,2}, and Dieter Nuyens^{1,2} ¹ Department of Cardiology, Ziekenhuis Oost Limburg, Genk, Belgium and ² Mobile Health Unit, Hasselt University, Hasselt, Belgium * Corresponding author.

On the basis of the review of Carpenter and Frontera we present a case of a 66-year-old female patient who was implanted with an implantable loop recorder (ILR) (LinQ, Medtronic) due to a history of unexplained syncope and symptoms of palpitations. After the procedure, the patient received a smartwatch device (E4, Empatica), which measures the photoplethysmography (PPG) signal at the wrist, and an iPhone 5S smartphone with a custom-made application (FibriCheckw), which measures the PPG signal in the tip of the finger using the smartphone camera. After synchronizing the data streams between the ILR, smartwatch, and smartphone, all AF events that occurred while wearing or using one of the smart devices were picked-up and identified as AF (as shown in Figure 1) by our in-house-developed algorithms. To conclude, persuasive technologies such as smartphones and smartwatches can provide a new potential in the detection and management of patients with AF. The full-length version of this report can be viewed at: <http://www.escardio.org/Guidelines-&-Education/E-learning/Clinical-cases/Electrophysiology/EP-Case-Reports>. Published on behalf of the European Society of Cardiology. All rights reserved. © The Author 2016. For permissions please email: journals.permissions@oup.com