LETTER

Effectiveness and safety of the Reveal LINQ™ implantable loop recorder - first clinical results

Vogiatzis I, Sdogkos E, Sideri A

Department of Cardiology, General Hospital of Veroia, Veroia, Greece

Dear Editor,

Implantable loop recorders (ILRs) provide remarkable and helpful data for the diagnosis and treatment of patients with syncopal episodes or palpitations[1].

In our Department, we retrospectively studied seven patients; five men and two women with a mean age of 68.4 ± 7.8 years, who had a loop recorder implanted during the preceding four years. Our report aims to present the clinical efficacy, safety, and diagnostic ability of the new Reveal LINQ™ insertable cardiac monitoring system (Medtronic, Tolochenaz, Switzerland), which seems to offer an easily implanted and significant patient monitoring device. The clinical features of the patients, the procedure of implantation, the complications, and the effectiveness of the method were evaluated for each patient. The device was inserted under local anesthesia, on an outpatient basis, in a skin pocket, through a small incision on the left parasternal side at about the level of the second or third rib (Figure 1). Once implanted, the device was activated by passing a magnet over it. In five patients, the loop recorder implantation was recommended for recurrent syncopal episodes and in two patients for a previous ischemic stroke and episodes of palpitations. The indications, previous workup, and ILR outcomes for each of the patients are presented in Table 1. In five of the seven patients, the diagnosis was made with a follow-up time of 19.5 ± 17.8 months, and the device was explanted in two of them. The interrogation of the implantable recorders was performed in the pacemaker unit, with the pacemaker programmer device available at the clinic. No severe or even minor complications were reported or recorded.

Long-term cardiac monitoring devices are used for over 20 years. Their size has been significantly reduced over time. The Reveal LINQ™ device is the smallest device available with dimensions 45 x 7 x 4 mm and a volume of about 1.2 ml. It has a battery life of up to 3 years and combines patient activated and automated rhythm recordings. The implantation does not require X-ray imaging. According to the latest ESC Guidelines for the management of syncope, implantable loop recorders are recommended in an early phase of evaluation in patients with recurrent syncope of uncertain origin. Their use should also be considered to document silent atrial fibrillation in survivors of an ischemic- cryptogenic-stroke without an established diagnosis of paroxysmal atrial fibrillation[2].

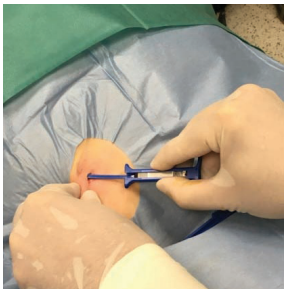

Figure 1: Subcutaneous injection of Reveal LINQ™ device.

Keywords: Implantable loop recorder, syncope, cryptogenic stroke

Conflict of interest

The authors declare no conflict of interest.

References

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Corresponding author: Dr Ioannis Vogiatzis, 22 K.Palaiologou-Samara str, 55236 Panorama, Thessaloniki, Greece, tel/fax: +302310345709, +306944276230, e-mail: ivogia@hotmail.gr

Table 1: Indications, previous workup, and implantable loop recorder (ILR) outcomes of the seven patients who had a ILR implanted during the preceding four years.

Pt	Indications	Previous workup	ILR outcomes
1	syncope	Holter, Tilt test, EPS, CSM, CT	SSS - Permanent DDDR pacemaker implantation
2	syncope	Holter, Tilt test, EPS, CSM, CT	Follow up
3	stroke - palpitations	Holter, CT	AF
4	syncope	Holter, Tilt test, EPS, CSM, CT	SSS -Permanent DDDR pacemaker implantation
5	syncope	Holter, CSM, CT	AV block - Permanent VDD pacemaker implantation
6	recurrent strokes	Holter, CT	AF
7	syncope	Holter, EPS, CSM, CT	Follow up

Pt: patient, EPS: electrophysiological study, CSM: carotid sinus massage, CT: computed tomography, SSS: sick sinus syndrome, DDDR:Dual Chamber Rate Adaptive Pacemaker, AV: atrioventricular, VDD: Dual Chamber Single Lead Pacemaker, AF: atrial fibrillation.