

**Rate of events in patients who underwent implantation of Internal Loop Recorder: A single center long term follow-up.**

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**Objective :**

Implanted Loop Recorder (ILR) is one of the modalities used for evaluation of benign unexplained arrhythmia. The purpose of this report is to determine the diagnostic yield of ILR in a selected cohort from a single center.

**Methods :**

We retrospectively collected data from 25 consecutive patients who underwent Internal Loop Recorder (ILR) implantation between Jan 2000 to Sep 2009. Ten patients had Medtronic Reveal DX device, Eleven received Medtronic Reveal Plus device, and four got St. Jude Confirm device. Follow up done until recorded event was documented or explantation of device due to End of battery life (EOL).

**Results :**

During the period of nearly 10 years, 25 devices were implanted. Age at implantation ranged between 17 and 90 years, with median of 53.8+/- 24.6 years. Sixteen were Male (64%). Syncope was the primary reason for the implant in 22 patients (88%). Median follow up period was 16.1 +/- 4.8 month (range 1-39 month). Twelve of 25 had a negative electrophysiologic study prior to the implantation.

Fourteen (55%) had hypertension. Six (24%) had documented Ischemic heart disease, but none had bradycardic event ( < 40 bpm) nor fast tachy-arrhythmias ( > 160 bpm) None of the four patients with prior atrial fibrillation or flutter had documented bradycardic event.

Four patient ( 16%) had Asystolic events leading to implantation of permanent pacemaker. In 2 patients (8%) had syncope and the ILR revealed sinus tachycardia (negative result).

**Conclusions :**

In our group ILR was helpful in 24% of implanted patients (16% were diagnosed as having bradycardia as a cause for their symptoms and underwent permanent pacemaker implantation and 8% did not have significant arrhythmia during syncope). These results emphasize the yield of ILR , as compared to short term EKG Holter in a carefully selected group of patients. Large scale trial is recommended to determine the diagnostic yield of ILR when implanted according to current guidelines.