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Conference Abstract

Home monitoring of cardiac implanted electronic device (pacemakers and defibrillators) is feasible: A pilot study

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Abstract

Introduction: Patients with cardiac implanted electronic devices (CIED) such as pacemakers and defibrillators periodically undergo in-office device check. The Medtronic CareLink® Network is a remote monitoring service that allows patients to transmit their implanted Medtronic CIED reports from home to a secure Internet website. Physicians and allied healthcare professionals (AHP) review these reports and upload to the hospital network. The transmitted reports offer information comparable to an in-office visit. We aim to describe patient's compliance to scheduled transmission and number of reports that require actions.

Methods: Over a 8 months period, 60 patients were recruited. Study subjects were trained to perform scheduled monthly home transmission. AHP reviewed these reports and uploaded to the hospital network. If these reports require action, AHP would alert the physicians. If needed, patients were scheduled an early clinic visit.

Results: 95% of patients (n=57) transmitted at least one report. A total of 327 transmissions were received (213 wireless and 114 non-wireless). 14.7% were overdue; received on second to fifth day of schedule. 11.6% were missed; defined as >5 days late. Of note, 46.5% of non-wireless transmissions were overdue or missed compared to 15.5% of wireless transmission (p<0.001). ALP reviewed all reports and 3.9% of these reports were highlighted to the physicians. Only 1.5% of total reports resulted in an early clinic review for the patients.

Conclusion: In our study, patient's compliance to home monitoring was high. Only 3.9% of reports required alerting the physician. The Medtronic CareLink® Network may be a suitable alternative to in-office CIED checks.