

“Convenient and cost-effective” Atrial Fibrillation screening with CardioDay and CARESCAPE monitors.

Key challenges

In patients with TIA or ischaemic stroke or transient ischaemic attack, continuous ECG recording for at least 72 hours is recommended to screen for atrial fibrillation¹ (AF). Providing a full standard Holter analysis for AF detection represented a significant workload for the Clinical Physiology department at the Department of Clinical Physiology, Medical Imaging Centre, Helsinki University Hospital. Additionally, the availability of resources often meant that this diagnostic test could not be completed during the patients' inpatient stay (average length of stay ranging 2-5 days) and would need an additional contact or visit to the hospital for the patient.

Solution

The Head of the Clinical Physiology Department at Helsinki University Hospital's Medical Imaging Centre hypothesised that the implementation of the connection of the CardioDay® Holter ECG software with the CARESCAPE™ monitoring and telemetry network could streamline the workflow. The ECG data captured on the monitors during the inpatient stay could be sent via CARESCAPE Gateway to the Holter system to perform an analysis to confirm the presence of AF.

Results/benefits

The implementation of CardioDay has transformed the approach to continuous ECG recording in the Helsinki University Hospital Stroke Unit. Patients' inpatient ECG is now reviewed quickly and easily by a Clinical Physiologist. This allows them to screen for AF. This process is completed within about 5 minutes compared to approximately 1 hour required before for a full Holter hook-up, download and analysis. This new solution has been described by the Hospital, as “convenient and cost effective” and estimated to save approximately one working day of a medical laboratory technician per week.

References

1. Kirchhof et al, (2016) ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS European Heart Journal (2016) 37, 2893–2962
2. <https://www.hus.fi/en/about-hus/Pages/default.aspx>
3. https://www.hus.fi/en/about-hus/Hospital_areas/neurocenter/Documents/Neurocenter%20presents%20itself.pdf
4. Lloyd-Jones DM, Wang TJ, Leip EP, Larson MG, Levy D, Vasan RS, D'Agostino RB, Massaro JM, Beiser A, Wolf PA, Benjamin EJ. Lifetime risk for development of atrial fibrillation: the Framingham Heart Study. *Circulation* 2004;110:1042–1046
5. Wolf PA, Abbott RD, Kannel WB. Atrial fibrillation as an independent risk factor for stroke: the Framingham Study. *Stroke* 1991;22:983–8.
6. Stroke Risk in Atrial Fibrillation Working Group. Independent predictors of stroke in patients with atrial fibrillation: a systematic review. *Neurology* 2007;69:546–54.

About HUS

Helsinki University Hospital provides medical care to approximately 500,000 patients annually. The hospital is responsible for providing specialized health care for the residents of the 24 member municipalities and serves as a hub for acute stroke revascularisation therapies for a population of 2 million.² The Stroke Unit comprises of 8 wired monitored beds with an additional 15 telemetry-monitored beds on the Stroke Ward. The unit is internationally recognised as the most effective in treating acute ischemic stroke worldwide.³

“Since the implementation of the CardioDay connection we can complete the screening for AF during the patients' inpatient stay and increase the frequency of new AF diagnoses.”

Neurologist at Helsinki University Hospital

Facts about atrial fibrillation and stroke

- Lifetime risks for development of AF are 1 in 4 for men and women 40 years of age and older⁴
- AF is a significant risk factor for ischaemic stroke⁵
- Prior stroke or TIA was found to be the strongest independent risk factor for subsequent stroke – increasing stroke risk 2.5-fold⁶

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