Stroke Prevention: Atrial Fibrillation Screening

The Zensor® vital signs monitoring system delivers a convenient and reliable method of diagnosing Atrial Fibrillation in a high risk population.

Due to the significance of AF as a preventable risk factor for stroke it is strongly believed by the medical community that there should be a systematic screening programme for this arrhythmia in the at-risk population, particularly as AF fits the Wilson-Jungner criteria set out by the WHO for a screening programme. Dr Robert Kelly, Consultant Cardiologist and Dr Rónán Collins, Consultant Geriatrician and Stroke Physician have designed a screening study to confirm the efficacy of screening patients with pre-existing associated risk factors. Dr Rónán Collins explains:

“Atrial Fibrillation (A-Fib or AF) is a rhythm disorder of your heart which is very common as we age. AF acts like a “wonky” cement mixer so that blood (the cement) in your heart (the mixer) is not stirred enough. This can result in the “lumps in your cement” or clots in your blood within your heart chamber which can fall into the pump of your heart and be ‘fired down the pipework’ until getting stuck, blocking flow and causing stroke. AF can be detected by checking your pulse (see http://www.irishheart.ie to find out how) or by monitoring your heart for a period of days. AF can occasionally be converted to a regular rhythm or the blood thinned (‘cement watered down’) to prevent clots forming and reduce the risk of stroke”.

Dr Rónán Collins

Leading cardiologist, Dr Robert Kelly, who has developed the ground breaking protocol, comments on the challenges associated with AF diagnosis and the need for undertaking the study:

“If strokes arising because of AF were prevented, the UK NHS could save nearly £60m per year in direct stroke costs alone.

The Trial’s hypothesis has been supported in the first group of 150 patients with significant numbers of those screened being found to have previously undiagnosed AF.

Currently, in the United States and Europe AF is diagnosed when:

1. The patient presents with palpitations or other symptoms (symptomatic) such as breathlessness or fatigue.
2. The patient has had a stroke and is monitored for atrial fibrillation
3. Opportunistic screening undertaken by GPs

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Encouraging Study Progress

The first stage of the trial is screening up to 320 patients, controlled from the clinics run at the Beacon Hospital in Sandyford and the AMNCH Hospital in Tallaght, Dublin. At this stage, nearly half of the patients have been screened. If a patient is diagnosed with AF they are referred back to their GP to review treatment options.

Patient recruitment has been extended to include patients from Wexford and Waterford. It is expected that the study will expand to enrol 1,000 patients. On completion of the study, a full economic and feasibility analysis will also finalise to ensure that benefits are confirmed to include both clinical and economic gains.

The Monitoring Device: zensor)

zensor), the vital signs monitor being used in the trial, is designed and manufactured by Belfast-based company Intelesens Ltd. Their cutting-edge technology utilizes multiple features ensuring the highest sensitivity algorithms for the detection of arrhythmia. Never before have motion and respiration been included in a body-worn ECG device. The patient can be screened without interrupting their normal daily routines. Patient feedback shows that the electrode patch-based device is much lighter and more comfortable than existing devices such as the Holter Monitor.

This study has been supported by a research grant from the Irish Heart Foundation.

zensor)) Features:

- 3-Lead ECG
- Respiration waveform and rate
- 3-Axis accelerometer for motion
- Motion artefact reducing electrodes
- Automatic arrhythmia detection
- Patient activated recording
- Wi-Fi Event Transmission

For more info, please visit: www.zensor.co.uk.

Other partners include:
National Cardiovascular and Stroke Research Network Ireland (NCSRN)
Clinical Research Ireland (CRI)
Dublin Centre for Clinical Research (DCCR)
BioBusiness Ltd.

References:


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This study is recruiting
If you, or someone you know, are over the age of 60 and have a history of high blood pressure, diabetes or congestive heart failure, you may be suitable for inclusion in this study. If you are interested in finding out more information, please contact the study research team on 00353 (0)89 2012995

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