Opportunistic testing for Atrial Fibrillation using Alivecor in an Urgent Care Centre

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Figure 1: Testing with Alivecor

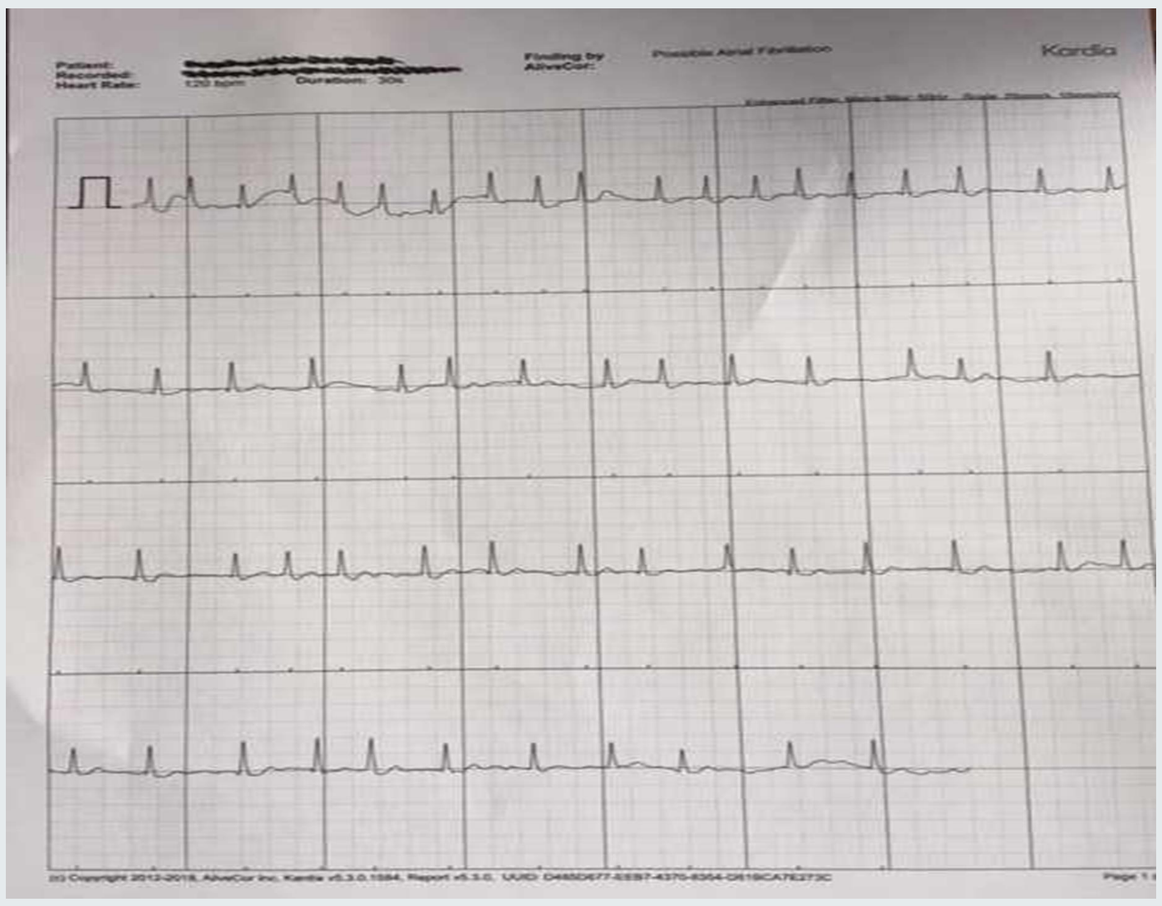

Figure 2: Recording from Alivecor showing possible AF

INTRODUCTION

It is well known that early identification of Atrial fibrillation (AF) has the ability to reduce AF-related strokes that are associated with significant mortality and morbidity as well as ensuring AF is diagnosed early and optimally managed. With the advent of smartphones and other mobile devices, we can now undertake opportunistic testing in a variety of clinical settings.

METHOD

Through the Health Innovation Network in London, three Kardia AliveCor devices were obtained with the aim of undertaking opportunistic testing within the Urgent Care Centre in a major London teaching hospital over a one-month period and to determine healthcare professionals' and patients' attitudes towards testing using AliveCor (**Figure 1**).

Working with an experienced arrhythmia nurse (GL), two student nurses (who were undertaking a one-month research elective) were trained in how to use the devices and how to interpret the rhythm strips. All ECGs with suspected AF or abnormalities were reviewed by the arrhythmia nurse.

RESULTS

Over four weeks, a total of 391 people were tested within the Urgent Care Centre.

Of these:

- 188 males and 203 females with a mean age of 40 years (SD +/- 17 years) and ages ranged from 16 to 87 years were tested.

- Possible Atrial Fibrillation was detected in 3 individuals: two males (31 and 84 years) and one female (72 years. These individuals were invited to an appointment at the rapid AF clinic where further investigation was undertaken and treatment (anticoagulation and other medication) initiated in a timely manner.

The older patients had appointments made for the rapid AF clinic, however the 31-year-old male refused any follow-up.

A further nine people refused to be tested with reasons given: previously been tested (n=1), feeling too tried (n=2), no reason given (n=4), in pain (n=1) and too nervous (n=1). Those who refused were mostly female (n=6) and ages ranged from 21 to 67 years.

DISCUSSION

We were able to test nearly 400 people in an urgent care centre with possible AF detected in three individuals.

In terms of acceptability from patients, the majority of patients were interested in having their heart rate checked using Alivecor.

From the perspective of the healthcare professionals, the urgent care staff were very positive and could see the benefit of opportunistic testing in their patients. Several staff requested a device that they could incorporate into their clinical practice.

CONCLUSION

Within this particular clinical setting of a busy London urgent care centre, testing for AF using Alivecor devices is feasible and opportunistic pulse rhythm checks were effective with the majority of patients happy to participate and positive feedback was also received from the healthcare professionals working in urgent care and a positive research elective experience for the 2 student nurses.

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