

# IS 24 HOUR ECG MONITORING THE INVESTIGATION OF CHOICE TO DIAGNOSE PAROXYSMAL ATRIAL FIBRILLATION?

Dr. Thisarana Wijayaratne<sup>1</sup>, Dr. Purnima Jayasuriya<sup>1</sup>, Dr. Natalie Pettit<sup>1</sup>, Dr. Beniel Vincent<sup>1</sup>  
<sup>1</sup> Worcester Royal Hospital, Stroke Department, Worcester, United Kingdom.

## Introduction

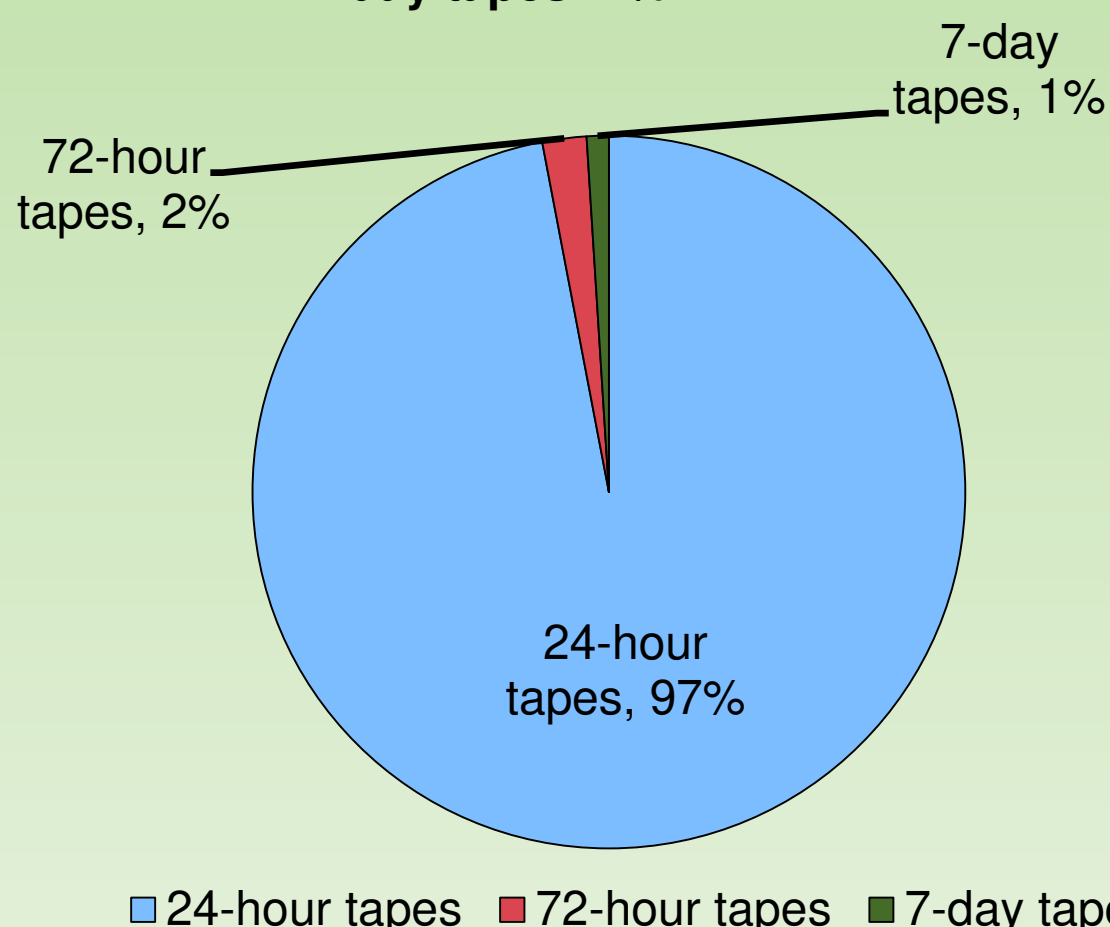
- Atrial fibrillation (AF) is the most common sustained adult cardiac arrhythmia causing ischaemic strokes.
- Paroxysmal AF (PAF) is undetected and untreated if sufficient ECG monitoring is not performed adequately.
- Adequate diagnosis of AF following an ischaemic stroke is vital to prevent future strokes.
- Royal College of Physicians (RCP) stroke guidelines recommend a minimum of 24 hours ECG monitoring after a stroke to exclude PAF (1).
- We wanted to study if this recommendation is reliable in diagnosing PAF.

## Methods

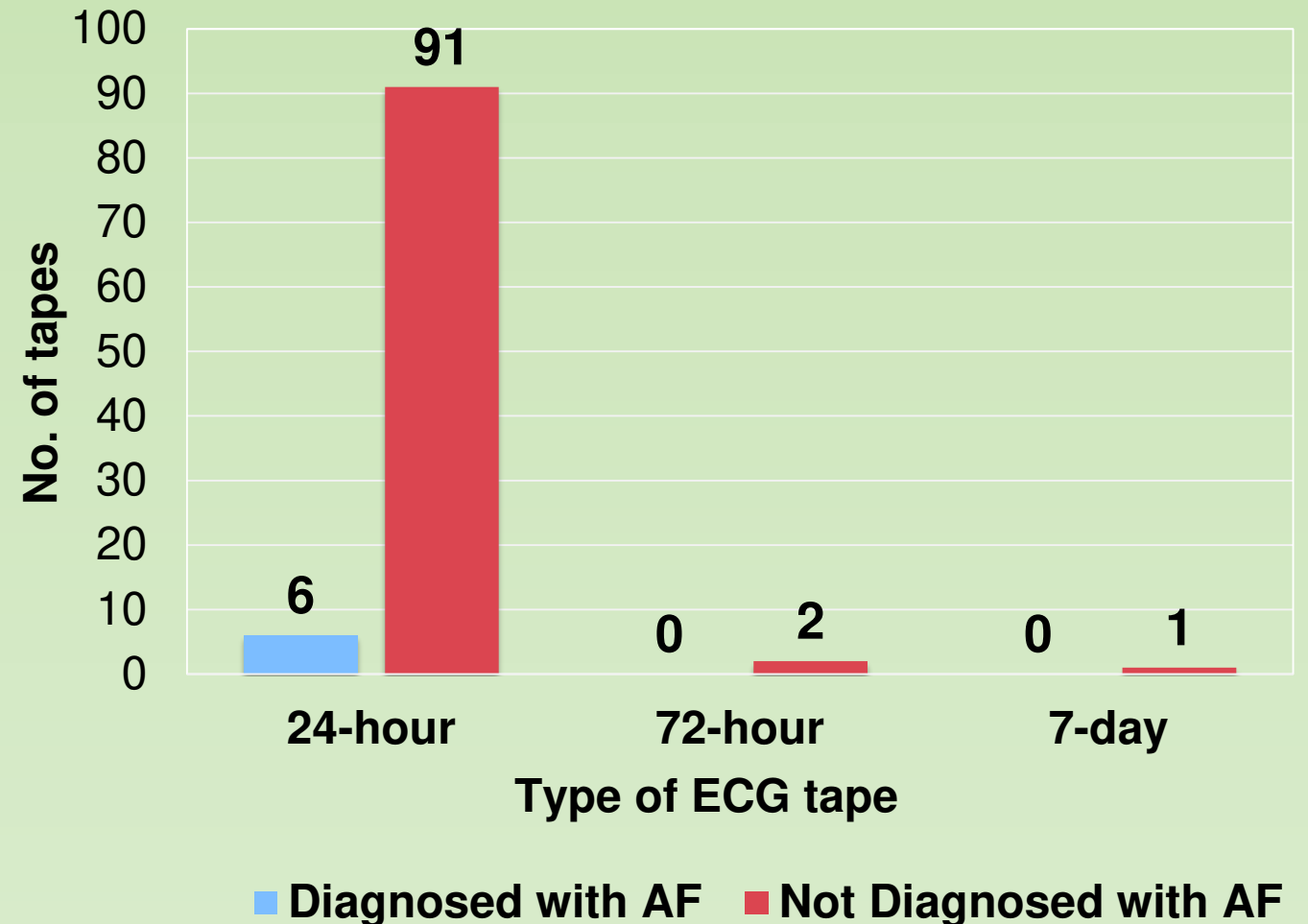
- Retrospective study over a period of 6 months carried out in Worcester Royal Hospital, Worcestershire Acute Hospitals NHS Trust.
- 100 ischemic stroke patients without known AF underwent prolonged ECG monitoring (24-hr, 72-hr, 7 day).
- Standards were set against the RCP stroke guidelines which recommend at least a 24hour ECG in all ischaemic stroke patients without known AF in order to diagnose PAF.
- Data was collected using patients electronic medical notes.

## Results

- Number of different tapes (n=100) -  
24 hour tapes- 97%  
72-hour tapes- 2%  
7 day tapes- 1%



Distribution of diagnosis of AF from different types of tapes



\*excluded

- Five 24-hour ECG tapes were done accidentally on patients with known AF of which two 24-hour tapes failed to identify AF.
- Three known AF patients detected on 24-hour ECG monitoring was excluded.

## Conclusion

- Detection rate of AF on 24-hour ECG in our study was 6%.
- In a systematic review involving 5038 subjects, the detection rate for new AF was 11.5% (2).
- The two 24-hour tapes which failed to detect AF in known AF patients highlights the need for prolonged ECG monitoring.
- Overall, greater the period of ECG monitoring the greater the likelihood of diagnosing PAF.

## Limitations

- Small patient population.
- There is limited data with regards to 72 hour tapes and 7 day tapes within this study. Prolonged ECG monitoring (>24 hours) will be required to diagnose patients with PAF.

## References

- Royal College of Physicians Stroke guidelines (<https://www.rcplondon.ac.uk/guidelines-policy/stroke-guidelines>) Accessed on- 09/05/2018
- Kishore A, Vail A, Majid A, Dawson J, et al, 2014. Detection of atrial fibrillation after ischemic stroke or transient ischemic attack: a systematic review and meta-analysis. Stroke, 45, 520-6