

Yoga vs Regular Exercise for Atrial Fibrillation: Design of the Yoga-AF Randomized Controlled Trial

Rose Crowley Bmed MD ^{1,2,3} Sonia Azzopardi RN ^{1,2}, Annie Curtin RN ^{1,2}, Georgia Rendell RN ^{1,2}, Louise Segan MBBS ^{1,2,3,4} Jeremy William MBBS ^{1,2,5} Kenneth Cho MBBS ^{1,2,3} Nicholas D'Elia MBBS ^{1,2,5} Margareta Sutija PhD ², Tommy Kende, David Chieng MBBS PhD ^{1,2,3,4} Hariharan Sugumar MBBS PhD ^{1,2,3,4} Aleksandr Voskoboinik MBBS PhD ^{1,2,4,5} Sandeep Prabhu MBBS PhD ^{1,2,3} Liang-Han Ling MBBS PhD ^{1,2,3} Vaughan G Macefield BSc PhD DSc ⁵ Jonathan M Kalman MBBS PhD ^{2,3,6}, Peter M Kistler MBBS PhD ^{1,2,3,4,5}

1. The Alfred Hospital 2. The Baker Heart and Diabetes Research Institute 3. University of Melbourne 4. Cabrini Malvern Hospital 5. Monash University 6. Royal Melbourne Hospital

Background

Atrial fibrillation (AF) affects 500,000 Australians, with the incidence predicted to increase 3-fold over the next 25 years. AF is responsible for increase in stroke, heart failure and doubling of mortality, as well as having significant impacts on quality of life. Lifestyle modification is a key pillar of AF management. Yoga has beneficial effects on cardiovascular health and has shown promise as an intervention in AF. However, randomised data are absent.

Aim

To determine the effect of regular yoga on AF episodes and AF burden in people with paroxysmal or persistent AF, undergoing a rhythm control management strategy, over a 12-month period.

Yoga is a Mind-Body Practice



Physical Postures

Improves balance and flexibility



Breathwork

Mindfulness, stress reduction and improved mental wellbeing
Increases vagal tone
Lowers HR and BP



Meditation

222 people with symptomatic paroxysmal or persistent AF

Baseline visit: in person

CPET, TTE, medical history, autonomic assessment, HR, BP, BMI, QOL questionnaires. ILR implant or smartwatch provided

Randomised 1:1

control group (n=111)

regular exercise as per AHA guidelines

yoga group (n=111)

3 or more yoga classes/week

Blinding period (12 weeks)

baseline AF burden derived from episodes during weeks 0 to 12

3, 6 and 9 months: telehealth visit

AF episodes and burden, health care utilisation, changes to AF management, BP, HRV, exercise diary

12-month final visit : in person

CPET, TTE, medical history, HR, BP, HRV, BMI, QOL questionnaires, AF episodes and burden, health care utilisation, changes to AF management, exercise diary

Methods

This is a randomised control trial of a yoga program in addition to standard care, compared to standard care alone in people with paroxysmal or persistent AF undergoing a rhythm control management strategy.

222 participants will be randomised 1:1 to the yoga intervention or control. Yoga will be conducted in studio and online with a target of at least 3 classes/week. The control group will be instructed to exercise for at least 150 minutes/week.

Rhythm monitoring will be with implantable loop recorder, or ECG capable smartwatch with AF detection and twice daily ECGs.

Following a 3-month training period, the dual primary endpoints of AF recurrence (time to recurrence, as defined by any sustained atrial tachyarrhythmia lasting > 1 hour) and AF burden will be determined at 12 months.

Conclusion

This study aims to determine the impact of yoga on AF recurrence and burden in people with paroxysmal and persistent AF. Yoga may provide an effective non-invasive, non-pharmacologic lifestyle strategy in the management of AF.

This study is currently recruiting, please contact Dr Rose Crowley r.crowley@Alfred.org.au mob 0400915584 to refer a patient!