Atrial fibrillation is an independent predictor of falls risk, syncope & orthostatic intolerance in older adults: a systematic review and meta-analysis

Authors:
V Malik¹, C Gallagher¹, D Linz¹, A Elliott¹, T Agbaedeng¹, M Emami¹, R Mishima¹, J Hendriks¹, R Mahajan¹, LF Arnolda², DH Lau¹, P Sanders¹, ¹University of Adelaide, Centre for Heart Rhythm Disorders - Adelaide - Australia, ²University of Wollongong - Wollongong - Australia,

Topic(s):
Atrial Fibrillation - Epidemiology, Prognosis, Outcome

Citation:

Funding Acknowledgements:
Dr Malik is supported by a Postgraduate Scholarship from The University of Adelaide. PROSPERO ID: CRD4201810721.

Introduction
The prevalence of Atrial Fibrillation (AF) climbs significantly in older adults and is becoming increasingly recognised as a risk factor for dementia. However, whether AF is an independent risk factor for falls and syncope is not established; despite evidence of autonomic dysfunction that can contribute to Orthostatic Intolerance (OI).

Purpose
We undertook a systematic review and meta-analysis of studies that reported the association of AF to falls, syncope and OI to assess whether the presence of AF is an independent risk factor.

Methods
CENTRAL, PubMed and EMBASE databases were searched from inception to April 2018 to retrieve relevant studies. Where possible, results were pooled using a random effects model.

Results
Nine studies were identified; the association of AF to falls in 6 studies, comprising 34 514 patients (mean age 74±9 years) and AF to syncope in 3 studies (6769 patients, 65±3 years). Pooled analyses demonstrate that AF is independently associated with falls (OR 1.15; 95% CI 1.04 – 1.28: P=0.007, Figure 1A) as well as syncope (OR 1.88; 95% CI 1.20-2.94: P=0.006, Figure 1B). Persistent AF was associated with OI in one reported study (4408 patients, 66±6 years).

Conclusion
AF is an independent risk factor for falls, syncope and orthostatic intolerance in older adults.
Atrial fibrillation is an independent predictor of falls risk, syncope & orthostatic intolerance in older adults: a systematic review and meta-analysis

Authors:
V Malik 1, C Gallagher 1, D Linz 1, A Elliott 1, T Agbaedeng 1, M Emami 1, R Mishima 1, J Hendriks 1, R Mahajan 1, LF Arnolda 2, DH Lau 1, P Sanders 1
1 University of Adelaide, Centre for Heart Rhythm Disorders - Adelaide - Australia, 2 University of Wollongong - Wollongong - Australia

Topic(s):
Atrial Fibrillation - Epidemiology, Prognosis, Outcome

Citation:

Funding Acknowledgements:
Dr Malik is supported by a Postgraduate Scholarship from The University of Adelaide. PROSPERO ID: CRD4201810721.

Introduction
The prevalence of Atrial Fibrillation (AF) climbs significantly in older adults and is becoming increasingly recognised as a risk factor for dementia. However, whether AF is an independent risk factor for falls and syncope is not established; despite evidence of autonomic dysfunction that can contribute to Orthostatic Intolerance (OI).

Purpose
We undertook a systematic review and meta-analysis of studies that reported the association of AF to falls, syncope and OI to assess whether the presence of AF is an independent risk factor.

Methods
CENTRAL, PubMed and EMBASE databases were searched from inception to April 2018 to retrieve relevant studies. Where possible; results were pooled using a random effects model.

Results
Nine studies were identified; the association of AF to falls in 6 studies, comprising 34,514 patients (mean age 74±9 years) and AF to syncope in 3 studies (6769 patients, 65±3 years). Pooled analyses demonstrate that AF is independently associated with falls (OR 1.15; 95% CI 1.04 – 1.28: P=0.007, Figure 1A) as well as syncope (OR 1.88; 95% CI 1.20–2.94: P=0.006, Figure 1B). Persistent AF was associated with OI in one reported study (4408 patients, 66±6 years).

Conclusion
AF is an independent risk factor for falls, syncope and orthostatic intolerance in older adults.