

Arrhythmias and Clinical EP

CLINICAL IMPORTANCE OF TROPONIN LEVEL IN 3,121 PATIENTS PRESENTING WITH ATRIAL FIBRILLATION (AF-TROP STUDY)

Poster Contributions

Poster Hall, Hall F

Saturday, March 16, 2019, 3:45 p.m.-4:30 p.m.

Session Title: Arrhythmias and Clinical EP: Other 2

Abstract Category: 06. Arrhythmias and Clinical EP: Other

Presentation Number: 1172-305

Authors: *Amit Kaura, Ahran Arnold, Vasileios Panoulas, Benjamin Glampson, Jim Davies, Kerrie Woods, Abdulrahim Mulla, Joe Omigie, Anoop D. Shah, Keith Channon, Jonathan N. Weber, Mark R. Thurst, Paul Elliott, Harry Hemingway, Bryan Williams, Folkert W. Asselbergs, Rajesh Kharbanda, Graham M. Lord, Narbeh Melikian, Riyaz Patel, Divaka Perera, Ajay Shah, David Lefroy, Darrel Francis, Jamil Mayet, NIHR Imperial Biomedical Research Centre, Imperial College London, London, United Kingdom*

Background: The clinical importance of troponin level in patients presenting with atrial fibrillation (AF) is uncertain. We investigated the relationship between troponin level, angiography and mortality in patients undergoing troponin testing with a primary diagnosis of AF.

Methods: We used the National Institute for Health Research (NIHR) Health Informatics Collaborative (NHIC) data of 3,121 patients who had a troponin measured at 5 UK cardiac centres between 2010 and 2017 who had a primary diagnosis of AF. Peak troponin levels were standardized as a multiple of each laboratory's 99th-percentile upper limit of normal (xULN).

Results: The relationship between troponin level and the hazard ratio of mortality was linear up to 10 xULN. At higher troponins, the hazard ratio plateaued at approximately 2.4 (Figure 1A). While the odds of undergoing coronary angiography were similar for troponin levels up to 10 xULN, beyond this, there was an exponentially increasing relationship (Figure 1B). When adjusting for coronary angiography, the positive relationship between troponin level and the hazard ratio of mortality was similar for troponin levels up until 10 xULN; however, at higher levels, the hazard ratio inverted (Figure 1C).

Conclusion: In patients presenting with AF, even mild to moderate troponin levels (up to 10x ULN) are clinically important; however, these patients are less likely to undergo coronary angiography, which was associated with a reduction in mortality in those with higher troponin levels.

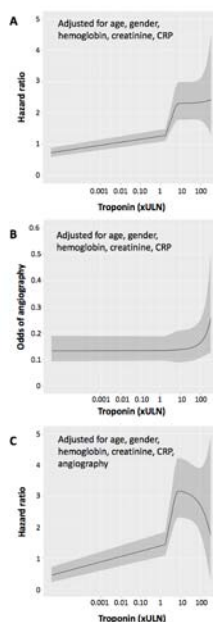


Figure 1. Association between troponin level, all-cause mortality and angiography in patients with atrial fibrillation