

# Minutes of the Fourth Ordinary Meeting

Held on Thursday 9<sup>th</sup> January 2020

*Joint Meeting with the Liverpool Society of Anaesthetists*

*'Advances in Atrial Fibrillation'*

*Professor Gregory Lip, Price-Evans Chair of Cardiovascular Medicine, University of Liverpool, and Director of the Liverpool Centre for Cardiovascular Science*

It was fantastic to have Professor Lip to come to speak to us so soon after his appointment to the Price-Evans Chair of Cardiovascular Medicine at the University of Liverpool. Having established an international reputation as a clinician and academic most recently in Birmingham, he is importantly leading the Liverpool Centre for Cardiovascular Science, a centre for cardiovascular research and innovation that links The University of Liverpool, Liverpool John Moores University, Liverpool Health Partners and the Liverpool Heart and Chest NHS Foundation Trust.

This was a masterful exposition of the condition Atrial Fibrillation, distilling complex and sometimes contradictory information to identify straightforward models for delivering high quality care to each patient.

Atrial Fibrillation (AF) is the commonest arrhythmia – occurring in 1 in 4 of us at some point. The risk is increased with other predisposing health conditions especially of course those affecting the heart but also the lungs. New onset AF is frequently seen in patients receiving intensive care, where these predisposing factors are joined by precipitating factors that can work together to increase the likelihood of AF. Estimates of incidence in ICU vary tremendously from 2% to 44%. Very large studies at population level are now available for research most notably in Denmark, Taiwan and South Korea, which Professor Lip has research access to. The Korean dataset indicates an onset rate of 12-13% in intensive care populations and those who develop it have a mortality rate of 24-27% by 6 months later. The longer the duration of AF in hours observed; the greater the in-hospital mortality.

AF is also major risk factor for stroke in general and in this ICU setting. Professor Lip outlined the real world approach that could be taken to deal with the risk of AF and particularly the risk of stroke. AF typically increases the risk for an individual of stroke five-fold. However there were difficulties in identifying pre-existing AF in patients with stroke. 7-day recordings more than doubled detection rates compared to a standard ECG.

First steps in treatment of AF include the control of symptoms and then the control of heart rate and heart rhythm. For unstable symptomatic patients post-operatively for example, cardioversion and treatment with anti-arrhythmic drugs such as amiodorone should be considered. Asymptomatic patients might benefits from anticoagulation and cardioversion.

As regards, rate and rhythm control, the jury was out on digoxin as research often gave conflicting results – sometimes in the same journal issue! Professor Lip advised that many trials and studies of drugs used to control heart rate and rhythm in AF gave inconsistent findings. Beta-blockers do not improve mortality rates.

New methods were emerging in AF detection in populations – moving towards screening if you like. This included new population based smart technology such as Apple watches – and in the Huawei Heart Study, a Liverpool-China collaborative study of >150,000 subjects identified a rate of AF of 0.2% for example.

In healthcare, risk tools have been developed that look at a number of predictive factors for stroke in patients with AF. Professor Lip reminded us that some of these factors are dynamic and risk can change. One key part of treatment is to work on the modifiable risk factors that have precipitated AF - weight, hypertension, and lack of exercise for example. Treating these of course will not just help reduce the risks from AF but will bring other health benefits.

Guidelines based on these risk tools can support decisions on preventative drug treatment with warfarin and the newer oral anticoagulants (NOACS). Warfarin of course required careful titration of dose and monitoring, NOACS appear safe with less deaths and less bleeds seen. Whole population data supports NOACs being effective with decreased stroke incidence and no increased incidence in serious bleeding observed.

The required overall approach to AF management can be summed up simply as ABC:

A – Avoid stroke

B – Better Symptom Control using Rate or Rhythm Control

C –Cardiovascular and other co-morbidities management

Questions included whether warfarin was still indicated? Yes in patients with heart valve issues and in those with impaired renal function; Is heparin indicated at onset? Yes if patient cannot tolerate oral medication; What about screening? An opportunistic approach may be as good as a whole population approach – but further research is underway.

The President thanked Professor Lip for a terrific lecture and the audience showed their appreciation with applause.

Dr Steve Ryan