Discovery of atrial fibrillation subtypes paves way for precision medicine

March 15 2019

The discovery of subtypes of atrial fibrillation paves the way for individualised treatment. That's the main message from the joint EHRA/AFNET conference, where new data from the CATCH ME project will be presented, and a consensus reached on personalised medicine approaches to improve patient care.

The meeting is being held on 15 and 16 March in Lisbon, Portugal. It is organised by the European Heart Rhythm Association (EHRA) of the European Society of Cardiology (ESC) and the Atrial Fibrillation NETwork (AFNET) with funding from the CATCH ME Consortium EU Horizon 2020 Grant.

Atrial fibrillation is the most common heart rhythm disorder (arrhythmia). It causes 20-30% of all strokes and also increases the risk of heart failure and sudden death. Signs of atrial fibrillation include palpitations, shortness of breath, tiredness, chest pain and dizziness.

Professor Paulus Kirchhof, one of the event organisers and chair of the 2016 ESC atrial fibrillation guidelines, said: "Atrial fibrillation remains one of the most common and most challenging conditions in cardiology. Patients have different profiles and medical problems related to atrial fibrillation. During the meeting we will review emerging data to discover patient profiles for precision medicine, enabling clinicians and researchers to better estimate who will benefit from current and emerging therapies."

Novel results from the CATCH ME project help define clinical types of atrial fibrillation based on the main cause and shed light on mechanisms of atrial fibrillation from gene expression analysis of human atrial tissue. The findings of these studies will be presented in full at the EHRA 2019 Congress. New information will also be presented on blood biomarkers for different types of atrial fibrillation, and on outcomes of atrial fibrillation patients who also have heart failure and in those who have a bleeding event.

The conference will be attended by around 80 leading scientists and clinicians in atrial fibrillation management and research, and industry partners. It will cover the entire spectrum of atrial fibrillation, from patterns of gene expression in atrial tissue (the "molecular signature"), to clinical types, patient management, healthcare systems, and patient education. This breadth will be reflected in a consensus paper. Among the statements set to be agreed are how to tailor the use of anticoagulation and rhythm control therapy to newly defined types of atrial fibrillation.

The meeting title is "Management of patients with atrial fibrillation: New therapies and special populations". In addition to the populations revealed by CATCH ME, these include patients with:

- Bleeding on anticoagulation, for whom a left atrial appendage occluder may prevent stroke at lower bleeding risk
- Concomitant heart failure, in whom there is controversy over the benefits of rhythm control therapy, particularly catheter ablation
- End stage kidney disease, who have high stroke and bleeding risks
- Very rare atrial arrhythmias detected by devices including smartwatches.

The current state of play on applications (apps) for diagnosis and

management of atrial fibrillation will be presented, as well as up-to-the-minute knowledge on how atrial fibrillation contributes to cognitive dysfunction and dementia following an EHRA consensus document published last year.

EHRA President Professor Hein Heidbuchel, one of the event organisers, said: "There is a need for more personalised medicine for the diverse group of patients with atrial fibrillation. Luckily, science is moving quickly, and during this meeting world experts will convene to present data that allow further refinement of the diagnosis and treatment of patients with atrial fibrillation. Our goal is to better control symptoms and further reduce the risks of stroke and premature death for affected patients."

More information: The 7th EHRA/AFNET Consensus Conference, "Management of patients with atrial fibrillation: New therapies and special populations", will be held in Lisbon, Portugal on 15 and 16 March 2019.

Provided by European Society of Cardiology