

Atrial Fibrillation with Concomitant Cardiac Disorders – Current Challenges and Emerging Strategies

An Expert Interview with Claudio Tondo

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Atrial fibrillation is an important cause of morbidity and mortality worldwide, and its incidence is increasing. It is prevalent in a number of cardiac disorders including channelopathies such as Brugada syndrome, hypertrophic cardiomyopathy and, most importantly, heart failure. Treatment strategies for atrial fibrillation should therefore take into consideration multiple clinical aspects. In an expert interview, Claudio Tondo of the University of Milan discusses the importance of individualised strategies for atrial fibrillation in patients with various concomitant cardiac disorders.

Q: What are the prognostic and therapeutic implications of atrial fibrillation in cardiac channelopathies?

Cardiac channelopathies represent a specific category of genetic-linked diseases with relevant clinical implication in terms of arrhythmic risk. Amid the different channelopathies, only few seem to be correlated to the risk to develop atrial fibrillation. Apart cases of familial atrial fibrillation, in which no specific gene-driven therapy can be proposed at the moment, it is noteworthy to highlight the relationship between patients with Brugada syndrome and the occurrence of atrial fibrillation. Even in this subset of patients, catheter ablation of atrial foci might be beneficial in reducing the burden of the arrhythmia. Anyhow, due to the paucity of therapeutic resources for channelopathies, treatment of atrial fibrillation in this context still remains confined to catheter ablation in selected patients.

Q: What is the optimal strategy for management of atrial fibrillation in hypertrophic cardiomyopathy?

The occurrence of atrial fibrillation in hypertrophic cardiomyopathy is always considered an adverse event. All the preventive pharmacologic measures need to be implemented, such as beta-blocker and angiotensin-converting enzyme (ACE) inhibitor therapies with the aim to slow the ventricular response and improve the haemodynamic response, respectively. Usually, when atrial fibrillation arises in the context of hypertrophic cardiomyopathy, all the possible strategies of treatment need to be considered. In the last few years, catheter ablation has become an effective non-pharmacologic option for the treatment of atrial fibrillation in these patients, as long as it is carried out in the early phase of the arrhythmia as to achieve a higher success rate. Left atrial dilation and fibrosis have detrimental effects on the atrial haemodynamic response and, when they occur, even the ablation results are negatively affected. Therefore, catheter ablation should be planned ahead of these anatomical and haemodynamic consequences.

Q: What new treatment strategies are emerging for patients with atrial fibrillation and concomitant heart failure?

The strict relationship between heart failure and atrial fibrillation is well recognised and, in the last few years, several investigators have struggled to reduce the likelihood of occurrence of atrial fibrillation in patients with heart failure. Randomised and non-randomised clinical studies have consistently shown the superiority of catheter ablation over the pharmacological treatment for the control of atrial fibrillation in heart failure patients, provided the ablative intervention is carried out in high volume centers and by expert operators. Moreover, catheter ablation can promote amelioration of left ventricular ejection fraction at larger extent than atrioventricular-junction ablation and cardiac resynchronisation therapy pacing, along with an improved functional properties during stress testing.

Q: How important is personalised therapy and integrated care in atrial fibrillation?

We all recognise that patients with atrial fibrillation need to be treated by considering several clinical aspects. The medical approach should include a proper 'patient counseling', spanning from diet control, regular physical activity to 'personalised' treatment in terms of hypertensive drugs and cholesterol-lowering medications. In other terms, upstream therapy, as recommended by the European Society of Cardiology, should be employed in each patient suffering from atrial fibrillation. On the other hand, the very promising clinical results achieved by the latest ablative techniques (such as cryoablation of the pulmonary veins) in paroxysmal atrial fibrillation, indicate that an earlier intervention can promote a higher success rate in the majority of patients. □