

Atrial fibrillation in 2014

An update

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Atrial fibrillation (AF) is an epidemic. Its prevalence is estimated at around 1–2% in the general population, rapidly rising with increasing age. Due to the aging population as well as a rise in the prevalence of risk factors for AF (arterial hypertension in particular), this number is going to further substantially increase over the coming years and decades. Novel treatment options have been introduced to improve morbidity and mortality in patients with AF, novel oral anticoagulants (NOACs) and catheter ablation in particular. Yet, more options lead to more questions: Which patient needs a NOAC for the prevention of stroke, who should still receive a vitamin K antagonist? And who should instead receive a left atrial appendage occluder? Is every patient with AF suitable for catheter ablation? What are the surgical options in patients with AF? What are the implications of severe comorbidities such as heart failure in the assessment and treatment of these patients? What is new in the pathophysiological understanding of AF, and how does it translate into novel therapeutic approaches? Indeed, as our understanding of the pathophysiology of AF grows, so do treatment options – and uncertainties. We therefore decided to put together a dedicated series of reviews dealing with the different aspects of AF, for which we invited experts from all over Switzerland to summarise the developments and give their critical assessment.

In the preceding issue of “*Cardiovascular Medicine*”, Nikola Pavlovic, Christian Sticherling and Michael Kühne reflected on the *epidemiology of AF*, both in Europe and in Switzerland [1]. They assess the current development of “AF burden”, followed by the current and projected impact on morbidity and mortality.

Finally, they estimate the cost of AF – an ever increasingly important aspect in any field of medicine – delineating severe differences across Europe with their respective implications.

Also in the last issue, Laurent Haegeli gave an update on *catheter ablation for atrial fibrillation* [2]. Arguably, no other invasive treatment option has gained as much attention in the treatment of AF over the last years as catheter ablation.

The author focuses on current technological developments as well as on the success and failure rates of the procedure. Furthermore, the important aspect of proper patient selection is discussed – a key factor for the successful and safe use of catheter ablation for AF.

In the current issue of “*Cardiovascular Medicine*”, two articles dealing with *stroke prevention in AF* are included. First, Nicole Bonetti and Jürg Beer critically review the use of *NOACs in AF* [3]. Ever since their introduction, NOACs have revolutionised the way anticoagulation is performed. However, many uncertainties persist in the daily use of these substances, partly because data from the large landmark trials do not deliver answers to all possible “real world” scenarios. In their article, the authors delineate a variety of typical clinical scenarios “outside the controlled trial world”, and offer useful practical solutions. Furthermore, Ahmed Khattab and Bernhard Meier are tackling the other hot topic related to stroke prevention, i.e., *left atrial appendage occlusion* [4]. Based on a historical overview, the authors describe the available percutaneous and surgical systems and review the evidence behind their use. Also here, careful and judicious patient selection is crucial for success – one of the key messages of the authors.

The upcoming issues of “*Cardiovascular Medicine*” will include the remaining three articles from this special series. Christoph Starck will review the *surgical options in patients with atrial fibrillation*, focussing both on stroke prevention as well as on treatment of the arrhythmia itself. Indeed, left atrial appendage occlusion was performed by cardiac surgeons years to decades before the advent of percutaneous closure devices, mainly at the time of valve surgery (“Cox-Maze procedure”). The author will review the significance of

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this procedure in the current day and age, as well as current and upcoming technologies from the field. David Altmann and Hans Rickli will tackle the important aspect of *AF treatment in the setting of chronic heart failure (CHF)*. As if treatment of AF was not complicated enough, adding CHF to the equation renders things even more challenging. Additionally, as for many interventions efficacy as well as safety decrease once CHF comes into play. Finally, Mehdi Namdar and Dipen Shah share with us their view on *novel pathophysiological aspects of AF*, including important implications for future diagnostic and therapeutic strategies.

In summary, every generalist, internist and cardiologist is seeing AF patients on a daily basis. But even in a frequently encountered disease like AF, optimal treatment is anything but trivial and in fact remains a challenge, also in 2014. An improved understanding of the disease processes has brought upon novel treat-

ment options which are continuously evolving, aiming at improving quality of life, morbidity and mortality of our patients. At the end of the day, however, there is no “one size fits all” treatment regimen for all AF patients. Every individual patient ultimately needs an individualised assessment and treatment plan. Only knowledge of the variety of treatment options enables us to realise these possibilities and serve our patients best.

References

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