

Editorial

Ablate and pace therapy for paroxysmal atrial fibrillation, too much too late

While many patients with atrial fibrillation are asymptomatic, this arrhythmia can cause serious haemodynamic complications and be extremely symptomatic in a few. Ablation of atrioventricular conduction offers rhythmic harmonization and symptomatic relief. However this is at the cost of pacemaker dependency and, in case of dysfunction, asyctole and bradyarrhythmia can become life threatening.

However, if the patient is in a condition of permanent drug-refractory and symptomatic rapid atrial fibrillation, the possibility of an improvement in the quality of life may outweigh the risk of an ablation of atrioventricular conduction. The place of this treatment is clearly more controversial in paroxysmal atrial fibrillation. Brignole *et al.*^[1] summarize some opinions expressed during a recent symposium on this topic. They describe indications when atrioventricular node ablation is indicated in paroxysmal fibrillation and how this procedure is performed. They are, however, less concerned about the possible harm that may be done with this procedure. Therefore, before sharing the electrophysiologists' enthusiasm about the easily obtainable success in destroying the atrioventricular conduction, one must be aware that this is a mutilating and irreversible intervention and will make the patient pacemaker-dependent for the rest of his/her life.

Paroxysmal atrial fibrillation is normally a benign condition, haemodynamic and embolic complications are extremely rare^[2] and so every intervention for this arrhythmia only addresses the relief of symptoms. Moreover, research on mechanisms of atrial fibrillation, and especially its paroxysmal form, is a field of intense activity. For many non-urgent situations, more logical and better treatments can be expected in the near future. To support this, recent studies on paroxysmal atrial fibrillation have indicated focal mechanisms and localized re-entries which can be cured by targeted ablation^[3].

To define drug-refractory paroxysmal atrial fibrillation clearly requires careful and responsible

clinical evaluation. In the case of normal ventricular heart rate during paroxysmal atrial fibrillation, although this might be symptomatic, ablation and pacing will bring no relief for the patient's symptoms at all. On the contrary, pacemaker interference in normal sinus rhythm, for example during phases of natural bradycardia, will be unavailable and reduce quality of life. Ablation in such a situation is against Hippocratic rules: first you should do no harm!

In addition we will not suggest this treatment to patients with the Brady-Tachy-syndrome in view of the effect of atrial^[4] pacing and especially not until more sophisticated pacing therapies^[5] have been evaluated. An ablation in this context should therefore initially be discouraged. It is wise to remember at this time that the technique of AV-node or His-bundle ablation was originally described as an accidental complication^[6]. But indeed the right-sided approach is extremely simple and, with regard to the destruction of the conduction system, highly successful. Things might look different in the extremely rare instances when a transaortic approach is indicated. This will put the patient at risk for arterial embolism and aortic valve damage, with a potential for severe long-term functional deterioration and valvular disease. In view of the mutilating effects of AV-node ablation, only experts should perform this procedure as they know best how to apply more appropriate alternative treatments. Although it is simple, this intervention should never be considered as an entry into interventional electrophysiology.

Although ablation of cardiac arrhythmias with modern interventional procedures can cure many patients, AV-node ablation in paroxysmal atrial fibrillation is not the field to promote. More elegant approaches for this arrhythmia are on the horizon and creating AV-block for this simple arrhythmia will be obsolete before indications have been elaborated.

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References

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