LETTER FROM THE EDITOR IN CHIEF

Dear Readers,

In this issue of the Journal I would like to highlight the article by Dr. Mann and his colleagues entitled ‘‘Cardioversion and Catheter Ablation of Atrial Fibrillation Using Novel Oral Anticoagulants’’. This article tackles the very important topic of the role of novel anticoagulants in the daily practice of physicians who treat patients with atrial fibrillation and perform cardioversions and catheter ablations.

In the review, Dr. Mann provided a summary of the clinical trials that investigated the role of the novel anticoagulants peri-cardioversion and catheter ablation for atrial fibrillation. The authors cited most of the clinical trials and meta-analyses in this field and discussed their strength and limitations.

The introduction of dabigatran 4 years ago, followed by rivaroxaban and apixaban, represented a major step forward in the treatment of atrial fibrillation and stroke prevention. These medications have numerous advantages over warfarin, one of which is the ease of use. The clinical studies comparing these medications to warfarin, including RE-LY, ROCKET-AF, ARISTOLE, and ENGAGE confirmed that non-inferiority, and in some instances the superiority, of these medications over warfarin in every aspect of efficacy and safety except gastrointestinal bleeding. As a result, these medications have been widely used and have replaced warfarin in a large number of patients with atrial fibrillation. These four well-designed landmark clinical studies provided data on the use of these agents in comparison with warfarin in more than 71,000 patients with atrial fibrillation. However data regarding the safety and efficacy of these medications in the setting of cardioversion and catheter ablation remains limited.

There are studies that investigated the role of these medications in the setting of cardioversion and catheter ablation. However these studies have limitations. None of them was prospective randomized. The design was retrospective in some, and prospective but non-randomized in others. While data from these studies are encouraging and hypothesis-generating, they do not provide the rigor of randomized clinical studies. In addition, the main limitation in most of these studies is that anticoagulation was not truly uninterrupted. The oral anticoagulants were held for one or two doses prior to the procedure. This is a major limitation because uninterrupted anticoagulation has 2 important advantages: 1- it eliminates the need for transesophageal echocardiogram to detect left atrial appendage clots prior to the procedure; and 2- it allows the infusion of protamine after ablation to reverse the effect of heparin and allow the removal of the femoral sheaths immediately after the procedure. Both of these advantages can save significant time and resources in busy electrophysiology laboratories.

In our practice we have been using rivaroxaban at least one month before ablation for atrial fibrillation. Our patients take the medication the night before the procedure and continue it the night of the procedure without interruption. Such uninterrupted regimen allows us to perform the procedure without the need for a transesophageal echocardiogram. This also allows us to remove the femoral sheaths at the end of the procedure by infusing protamine and without the worry of thrombus formation in the left atrium. This approach however has limitations. Like with other novel oral anticoagulants, the assessment of compliance with rivaroxaban is more difficult than with vitamin K antagonists and there are no validated tests to measure the anticoagulation effect. Moreover there is no antidote for these agents which may lead severe consequences if complications such as cardiac perforation were to occur.

In summary, I believe that the use of the novel oral anticoagulants simplifies catheter ablation and cardioversion. They are being increasingly used instead of warfarin in many laboratories, including ours. However our confidence in this approach will be much stronger in the presence of data derived from prospective randomized clinical studies. We are looking forward to the completion of the X-VERT and VENTURE – AF studies which will hopefully provide guidance in this field.

Additionally, I would like to add that Septembers Letter from the Editor was written on Sohns and colleagues entitled, ‘‘Catheter Contact Force: A Review of Emerging Tenchniques and Technologies in AF Ablation’’, which I am
excited to publish within this October Issue. Please reference my September letter as well Dr. DePotters Expert Commentary on this review and email me on your thoughts.

Warm regards,

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