

## Using a Scorpion™ Ablation Catheter for the Ablation of Atrial Flutter

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### Introduction

Bard's 5mm tip Scorpion has become my catheter of choice for ablation of atrial flutter, after using both 4 and 8mm configurations made by other companies. I initially utilized a braided 4mm ablation catheter. This provided good stability. Linear application of radiofrequency along the septal isthmus with this catheter was limited in some cases by a backwards-forward (away from or towards the ventricle) motion during the respiratory cycle. This motion was more pronounced in those patients who had a prominent Eustachian ridge or coexistent sleep apnea; the latter of which affects about one third of my atrial flutter patients. I began using an 8mm temperature catheter when it became available. Given the longer tip, this catheter was less affected by this motion during the respiratory cycle. A single linear application was more likely to be successful at producing bidirectional block. The 8mm catheter did have a few weaknesses which became increasingly transparent. The large electrode made it a poor mapping catheter when looking for areas of conduction in a failed line of block. Additionally, the large tip made it difficult to achieve adequate contact near the base of the Eustachian ridge in some patients. Finally, the catheter did not allow us to use the Medtronic generator and the Localisa 3-D mapping system.

### Case Study

Two similar, consecutive patients presented for atrial flutter ablation. Both were men in their forties and suffered from sleep apnea with resulting pulmonary hypertension. Both presented to the EP lab in typical atrial flutter. Attempts at producing bidirectional block using the 8mm ablation catheter were unsuccessful. As the catheter was withdrawn either into the S-AFL

sheath or the sheath itself was withdrawn there was poor tissue contact near the base of the ridge. Flutter persisted in each case. For each case, the 8mm ablation catheter was exchanged for Bard's 5mm Scorpion. In both cases, the area of conduction was mapped and ablated with a *single radiofrequency application*. By using the distal curve, firm tissue contact was maintained and bidirectional block was achieved. Neither patient has had a recurrence to date.

### Conclusions

Based on these two cases, the Bard Scorpion has become my catheter of choice for atrial flutter ablation. Since making the change, it has continued to perform well with a high success rate. There are several features of the catheter which allow it to do so. I feel the dual curves, especially the distal curve, are instrumental in maintaining consistent and adequate tissue contact. By being able to adjust the curves independently, you can account for various differences in cardiac anatomy. Rather than having to exchange a single curve ablation catheter for one of a different length (2, 2.5, 3 inch, etc) during a case, you have the ability to alter the tip using the second curve. This has decreased costs as *I am unlikely to need a second ablation catheter to complete the study, regardless of the anatomy present.*

The catheter can be used with the Medtronic generator so I am again able to use 3-D mapping (Localisa) which decreases fluoro time and increases safety by monitoring a second plane. The catheter body provides the support of a braided catheter without limiting lateral motion. Use of the distal curve enables the user to easily navigate under the tricuspid annulus catheter. Doing so provides additional downward force on the catheter, increasing tissue contact. It is the combination of these features that makes Bard's Scorpion well suited for ablation of atrial flutter.