To the Editor:

We commend Baugh et al.1 for their treatment pathway for the emergency department (ED) management of atrial fibrillation (AF) and flutter (AFL; combined AFF). This will help clinicians facing bedside management decisions. It will also provide a model for ED leaders and key stakeholders creating a multidisciplinary comprehensive emergency care pathway for their own medical centers. Three issues on pharmacologic cardioversion, however, warrant clarification.

First, the authors recommend pharmacologic cardioversion “for patients who are poor sedation candidates secondary to patient or department resource factors.”1 The indications for pharmacologic cardioversion are broader when physician and patient preferences are considered. Some patients, despite reassurances, are hesitant to undergo procedural sedation with electrical cardioversion and would rather receive a pharmacologic trial. Also, many physicians favor the convenience of ordering a medication that may obviate the need for procedural sedation.

Second, the authors should consider prolonging their recommended “effect period” of ibutilide. Prospective studies uniformly provide a minimum of 60 minutes following the completion of ibutilide infusion to allow the medication to work before considering electrical cardioversion (that is, 90 minutes from initiation if using standard 30-minute dosing: 10-minute infusion, 10-minute interval, 10-minute infusion).2 To routinely hasten to electrical cardioversion can short-circuit ibutilide’s opportunity for success by prematurely deeming it ineffective.

The authors make this recommendation: “Ibutilide 1mg IV over 10 min; may repeat same dose 10 min after first infusion if still in [AFF]; if still in [AFF] at 30 minutes consider electrical cardioversion.”1 It may be unclear from their wording when the 30-minute clock begins. If we allow it to start at the completion of the last infusion, it is still short by 30 minutes.

The conventional timeline from ibutilide initiation through the full 60-minute postinfusion effect period is also concordant with the recent-onset AFF literature. Mean time from drug initiation to sinus restoration varies considerably: from 19 (±9) minutes in one small prospective study with a 90-minute endpoint3 to 28 (±16) minutes for AFL and 53 (±25) minutes for AF in a larger trial with a 4.5-hour endpoint.4 Constraining the standard timeline may encourage unnecessary procedural sedation and electrical cardioversion, without reducing overall length of stay, which requires a minimum 4-hour monitoring period.2

Our third suggestion expands the prophylactic MgSO4 dosing range beyond 2 g. Their reasoning for adjunct MgSO4 is not explained, but it can serve two roles: at moderate doses, it enhances the effectiveness of ibutilide and, at higher doses (10 g over 3 hours), it may also reduce the incidence of polymorphic ventricular tachycardia.2 Until better dose-ranging studies are published, the limited evidence suggests that MgSO4 dose matters: 1 g has no measurable impact, whereas doses from 2 to 4 g seem to have escalating effects on the rate of ibutilide-induced cardioversion.5 Since moderate-dose MgSO4 has a good safety profile and is well tolerated, it might be wise to recommend either a higher dose (e.g., 4 g) or suggest a range like 2 to 4 g, explaining that higher doses may better augment ibutilide’s effectiveness.2 These slight modifications could make the author’s clinical pathway even more helpful.
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