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We applaud Ian Stiell and colleagues[1] for their well designed and executed trial comparing two common methods of cardioversion for stable emergency department patients with acute atrial fibrillation. Their efficacy and safety results will better inform the shared decision-making conversations we undertake with our emergency department patients eligible for elective cardioversion.

We have two crucial questions to help us evaluate the translatability of the findings to patient care. First, study participants "received up to three consecutive biphasic waveform shocks. The first shock was set at 200 J but could be higher for subsequent shocks".[1] The first shock did not restore sinus rhythm in 15% of patients (37 of 244). The protocol allowed for higher energy (>200 J) for the second and third shocks. However, many emergency departments, including ours in Spain and across the US, have only biphasic defibrillators that deliver a maximum of 200 J. This might preclude us from replicating the study's cardioversion success rates. It would be helpful if the authors could report the number of cases that received energy levels over 200 J.

Second, pretreatment with intravenous procainamide has not been shown to have clinical benefit with monophasic direct-current (DC) cardioversion of patients with atrial fibrillation.[2,3] This study found similar results in patients receiving biphasic DC cardioversion: the procainamide pretreatment group was no more responsive to DC cardioversion than those without pretreatment. This result disconfirmed the authors' hypothesis as mentioned in their appendix. We would like to know how the authors interpreted these results.

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I read with great interest the Article by Ian Stiell and colleagues.[1] The findings of this well designed trial will add substantially to the literature on the topic of cardioversion for patients with acute atrial fibrillation presenting to an emergency department.

One point made in the Article deserves clarification. Inadvertently perhaps, the authors appear to overstate the benefits of emergency department cardioversion, and this might cause some confusion about the management of patients with acute atrial fibrillation. The benefits of emergency department cardioversion of acute atrial fibrillation are still yet to be completely defined. Stiell and colleagues[1] state that rapid cardioversion in the emergency department "[resolves] acute symptoms" and "obviates the need for anticoagulation in low-risk patients". However, some patients at low risk might have atrial fibrillation with mild associated symptoms that do not affect daily activity, and they might choose not to undergo cardioversion. Guidelines[2–4] advise that patients at low risk (with low CHA_2DS_2-VASc scores) do not require long-term anticoagulation, and the forgoing of thromboprophylaxis does not depend on successful cardioversion in the emergency department. Nevertheless, emergency department cardioversion for atrial fibrillation within 48 h could prevent the need for short-term anticoagulation or invasive testing in those patients at low risk who might instead decide later—outside the 48 h window—that they would prefer to be in sinus rhythm. Patients who decide to postpone cardioversion and subsequently miss the 48 h window will require anticoagulation for 3 weeks or transoesophageal echocardiography to exclude thrombus before undergoing cardioversion.[2–4]

The obviation of pre-procedural anticoagulation or transoesophageal echocardiography before postponed cardioversion is an important clarification of a proposed benefit of immediate emergency department cardioversion of acute atrial fibrillation.


BSIP/Getty Images

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