How long do patients wait? A real-world study on the delays associated with different anticoagulants for elective cardioversion

Authors: Chris Wall, Tania Jankowski, Vinci Naruka and Paula Mota

Aims

A retrospective comparison of the latency between the time of referral and the date of cardioversion for patients either starting or continuing on different anticoagulants.

Methods

The study included all attempts of elective cardioversion in a large regional hospital from 2013 to 2017 (n=1,374). 583 had not been previously cardioverted, 297 had been previously cardioverted and 494 had an unknown status. These cardioversions were distributed unequally between patients on warfarin, rivaroxaban and apixaban.

The referrals for cardioversion were either from primary care or from other cardiologists. The referral time was recorded and the patients were then started on anticoagulation, either at the time of referral or after the pre-assessment clinic, if they were not already on an anticoagulant. At the time of cardioversion, 789 cases were anticoagulated on warfarin, 215 on apixaban and 370 on rivaroxaban.

The primary outcome measure was the time in weeks from referral to the date of attempted electrical cardioversion. The groups were compared with Kruskal-Wallis testing and Mann-Whitney-U testing as they were non-parametrically distributed.

Results

The rivaroxaban and apixaban groups (direct oral anticoagulant C groups) demonstrated a median time to cardioversion of 7 weeks, compared with the warfarin group, who had a median time of 9 weeks. While the direct oral anticoagulants (DOAC) groups were not significantly different to each other, they were statistically significantly different from warfarin ($p<0.00000001$). We could not demonstrate any differences in the cohorts of patients with different anticoagulants. Both groups had shorter delays if they were previously cardioverted, although this difference was larger in the DOAC groups. Very long waiting times (≥20 weeks) were disproportionately more likely to occur in the warfarin group. At 12-week follow up there was no significant difference in rate of adverse consequences under each anticoagulant. The patients in the warfarin group had significantly worse probability of successful cardioversion, and non-significantly worse probability of being in sinus rhythm at 12 weeks.

Conclusion

DOACs appear to significantly shorten the latency between the decision to cardiovert and the cardioversion procedure in a real-world setting. This real-world study demonstrates a delay of 2 weeks in patients who were anticoagulated on warfarin rather than a DOAC. In this study, patients anticoagulated with warfarin had a significantly worse rhythm control result and a non-signficant difference at the 12-week follow-up with no measured difference in the patient cohorts. As such, delaying cardioversion reduces its benefits, retains the same risks and exposes the patient to a longer period with adverse symptoms. ■

Conflict of interest statement

None declared.

Authors: William Harvey Hospital of East Kent Hospitals NHS Trust, UK