

Management of Warfarin in Children With Heart Disease

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We read with interest the publication by Mahle et al. [2] reporting the impact of implementing a computer dosing program to administer warfarin for pediatric patients. The key outcome measures used in this study were time in the therapeutic range (TTR), sociodemographic variables, and adverse events. The authors concluded that use of the computer dosing program improved TTR and that sociodemographic factors including female gender and non-white ethnicity were associated with lower rates of TTR achievement. The authors did not mention whether the rate of adverse events altered after initiation of the computer dosing program.

In response to this publication, we raise one significant point specifically relating to the issue of reporting warfarin-related major bleeding events. The authors drew parallels between a review reporting Oral Anticoagulant Therapy outcomes that we published in 2011 [1] and their own outcome data, specifically the rates of bleeding. Their comparison is problematic for two reasons. First, the authors attributed to our review a comparative rate of 3.2%

for major bleeding in children with prosthetic cardiac valves. This rate was reported by Monagle et al. [3] in a 2001 review, and did not figure in the more recent data reviewed in our paper except for a brief mention in our discussion. Second, and more importantly, Mahle et al. [2] did not provide an a priori definition of major bleeding in their study. As highlighted in our review, failure to provide a clear definition of major bleeding is a key contributor to the ongoing lack of clarity regarding the true incidence of warfarin-related major bleeding in pediatric cohorts.

We raise this point in an effort to promote improved determination of anticoagulant therapy outcome measures in children. Without improved consistency in approaches taken to determine the safety and efficacy of anticoagulant therapy in pediatrics, our ability to assess accurately and reliably the impact of interventions aimed at improving outcomes will be significantly hindered.

References

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