Title:
Complication Rates Associated with Direct Oral Anticoagulants in Patients Undergoing Cardiac Implantable Electronic Device Procedures

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Session Title:
Direct Oral Anticoagulant Management in Patients Undergoing Cardiac Implantable Electronic Device Procedures

Slot:
F 16: Friday, 28 July 2017: 2:30 PM-3:45 PM
Scheduled Time:
3:10 PM

Keywords:
cardiac implantable electronic device (CIED), cardiology and direct oral anticoagulant (DOAC)

References:


from the randomized evaluation of long-term anticoagulation therapy (RE-LY) randomized trial. Circulation, 126(3), 343-348. doi: 10.1161/CIRCULATIONAHA.111.090464


Abstract Summary:
Does direct oral anticoagulant (DOAC) management in the periprocedural period surrounding cardiac implantable electronic device (CIED) procedures have an impact on bleeding and thrombotic complication rates? We have analyzed complication rates and evaluated for any statistically significant contributing factors.

Learning Activity:

<table>
<thead>
<tr>
<th>LEARNING OBJECTIVES</th>
<th>EXPANDED CONTENT OUTLINE</th>
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<tr>
<td>Describe the reported bleeding and thrombotic complication rates for those patients taking DOACs in the periprocedural period.</td>
<td>Review of existing literature on the topic of bleeding and thrombotic complications in those patients taking DOACs at the time of a procedure.</td>
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<td>Identify what DOAC management strategy is safest for patients undergoing CIED procedures.</td>
<td>Description of study objectives, methods, and results.</td>
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<td>Discussion of the results of our study in the context of what constitutes best practice for DOAC management at the time of CIED procedures.</td>
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Abstract Text:

Purpose: There is limited outcome data on bleeding and thrombotic complications in patients taking DOACs at the time of procedures (Beyer-Westendor et al., 2013). This represents an opportunity for nursing science to study DOAC management in this setting to reduce complications and optimize patient outcomes.

Methods: To gain more knowledge on bleeding and thrombotic complication rates, we performed a retrospective chart review of all adult patients prescribed DOACs at the time of CIED procedures at our three facilities from January 2012-June 2016. We reviewed frequency data regarding bleeding and thrombotic complication rates and analyzed for any statistically significant correlation with DOAC management in the periprocedural period to include how many days the DOAC was held before and after the procedure, and if they were bridged with heparin. We also analyzed the data for any statistically significant correlation between complication rates and patient comorbidities, concurrent medications, procedure type, facility, and year.

Results: Our study had a total of 309 qualifying cases. The complication rates in our study were low, with three bleeding complications and no thrombotic complications. The three bleeding complications were hematomas in advanced age individuals taking rivaroxaban, however these patient specific factors were not statistically significant as the low numbers of complications prohibited us from running statistical analysis of the complication rates in relation to DOAC management and contributing patient specific factors.

Conclusion: Decisions on how to manage anticoagulation in the periprocedural period consider the patient and procedure specific bleeding and thrombotic risks (Daniels, 2015). Overall, our results show that performing CIED procedures on patients taking DOACs is safe from a bleeding and thrombosis standpoint regardless of the procedure-specific bleeding and thrombotic risks. They were also safe regardless of the length of time DOACs were held before, after, or bridged in the periprocedural setting. To ensure patient safety in the future, we would recommend that professional societies develop consensus guidelines on how to best manage DOACs in the periprocedural setting to standardize care and reduce potential complications.