Oral Anticoagulation in Nursing Home Residents

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In his presentation, “Reducing Polypharmacy in the Nursing Facility: An Activist Approach” (American Medical Directors Association [AMDA] meeting, Atlanta, March 17, 2001), Dr. Richard Ackermann disagreed with the prevalent Anticoagulation Guidelines for Patients with Atrial Fibrillation. In general, these recommendations divide patients into categories of < 65 years of age; 65 to 75 years; and > 75 years, and recommend the use of Coumadin anticoagulation for those with concurrent risk factors and for all patients over 75 years of age.1

This issue represents a dilemma for medical directors. There are multiple articles in the literature concerned with the alleged underuse of oral anticoagulation with warfarin (OAC) in atrial fibrillation. Bungard et al. concludes that “despite conclusive evidence from randomized, controlled clinical trials, the use of warfarin for the prevention of ischemic strokes is suboptimal.”2 Connolly writes, “Warfarin reduces the risk by two-thirds, but doctors still aren’t prescribing it enough.”3

The case favoring the use of Warfarin is well documented in articles by Robert Hart et al.: “All patients with atrial fibrillation should be evaluated for factors associated with additional risk, and their stroke risk should be estimated.”4 Patients at high risk for stroke and many of those at moderate risk should be considered for anticoagulation.”5 However, another view is expressed by Taylor et al.: “The heterogeneity between the trials and the limited data result in considerable uncertainty about the value of long-term anticoagulation compared with antiplatelet treatment. The risks of bleeding and the higher cost of anticoagulation make it an even less convincing option.”6

Much of the dispute stems from the age groupings in the consensus recommendations (< 65; 65 to 75; > 75).1 A long-term care facility may well have a median age of 85, and a cohort of patients with severe dementia and disability. In the study groups subjected to metaanalysis, the aggregate median age was 69, with only a very small aggregate group older than 85 years.5 The residual life expectancy in the general population, is 17.7 years at age 65, 11.8 years at age 75, and 6.7 years at age 85.7 Projecting data obtained on 75-year-olds to those who are over 85 and highly disabled may not make sense.

Of specific concern is the concurrence of advanced age and dementia in the consideration of OAC. Rosand et al. write, “A role for CAA (cerebral amyloid angiopathy) in warfarin-related ICH (intracerebral hemorrhage) is also consistent with the observed risk of this complication with advancing age.”8 The prevalence of CAA is markedly age dependent. It can be identified pathologically in ~35% of brains from individuals > 85 years old, one-third of whom are affected to the severe extent associated with hemorrhage.”

Thus there is suggestive evidence that the consensus recommendations should be revised to categorize 75 to 85 years and > 85 years as separate entities. Patients with advanced dementia and extreme old age should be considered at higher risk for ICH by virtue of possible cerebral amyloid angiopathy as well as the increased risk of falls.

Age is but one criteria in a complex decision-making process. Some patients under age 85 have high risks of bleeding on warfarin due to other factors, and some patients over age 85 should be anticoagulated. Physicians must individualize patients taking all factors into consideration.

The medical director does not supplant attending physicians in the care of individual patients; however, we have the following responsibilities: (1) that attending physicians are educated regarding the abundance of evidence in the literature regarding the benefits and risks of oral anticoagulation therapy in atrial fibrillation; (2) that reasons for decisions made on behalf of individual patients are documented; (3) that discussions with competent patients, or if the patient is deemed to be incompetent the responsible party, is documented as to patient preferences and values; and (4) that international normalized ratio (INR) target ranges are individually established and monitored to reduce the incidence of adverse outcome.

A quality assurance (QA) initiative that evaluates (1) all patients on OAC and (2) those patients with atrial fibrillation who are not on OAC should improve outcome for residents. The issue of OAC for stroke prevention in patients > 65 suffering with atrial fibrillation has such potential for both benefit and harm that it should attract the attention of medical directors in educating attending physicians, and implementing facility QA protocols.
Table 1. Oral Anticoagulation Therapy and Atrial Fibrillation QA Work Tool

<table>
<thead>
<tr>
<th>Date</th>
<th>Re: Patient</th>
<th>Age</th>
<th>Dr.</th>
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Patient (circle) is on Warfarin/suffers from atrial fibrillation
If on Warfarin, the current daily dose is __________
The frequency of INR testing is __________
Your target range is set at __________ result __________

Factors favoring use of OAC in atrial fibrillation
Hypertension Diabetes History Smoking
Recent DVT or PE without Greenfield filter
Family History Prior MI Prior Stroke
Elevated Cholesterol Obesity Age 75–85

Factors against use of OAC
Young age (<65 without concurrent risk factors)
Dementia Stage of dementia (early) (middle) (late)
Prior GI bleed Risk of Falls
Advanced Age>85 On 8 or > other meds

INR = international normalized ratio; DVT = deep venous thrombosis; PE = pulmonary embolism; MI = myocardial infarction; OAC = oral anticoagulation; GI = gastrointestinal.

A PROPOSED QA MODEL

A QA Model is proposed as follows:

1. Identify all patients in your facility who are either on warfarin or who suffer from atrial fibrillation.
2. Have your QA Nurse complete the evaluation tool (Table 1) for each patient so identified. Review the form for each patient, and review individual charts that are found to have concerns.
3. Send the “Letter to Physicians” (Appendix 1) indicating which patients you are requesting them to further evaluate. Identify specific concerns that might be uncovered in the QA review in individualized letters.
4. Follow up with medical director review of the physician’s responses.

APPENDIX

LETTER TO PHYSICIANS REGARDING OAC

Date ________________

Dear Dr. ________________

Consensus recommendations strongly favor the use of Oral anticoagulation therapy with warfarin for stroke prevention in patients suffering from ATRIAL FIBRILLATION who are > 75 and < 85 years old.

For all patients who suffer from atrial fibrillation, attending physicians must weigh, on an individualized basis, both the concurrent risk factors for stroke, and the concurrent risk factors for warfarin induced bleed.

Among the factors increasing the risk of stroke with atrial fibrillation include age > 65, diabetes, hypertension, smoking history, elevated cholesterol, and prior history of stroke.

Patients who are > 85 years of age, or at increased risk of falls, or suffer from dementia may be at higher risk of intracerebral hemorrhage. Dementia may be associated with amyloid angiopathy, which appears to be associated with a higher risk of intracerebral hemorrhage. For patients in these categories, attending physicians may consider forgoing warfarin therapy or setting lower INR target ranges.

For all patients undergoing anticoagulation therapy, it is important that physicians set INR target ranges individualized for their patient based on risk factors. INR ranges < 1.5 are not in the literature felt to be effective in reducing stroke, and INR ranges > 4.0 are seen as associated with higher risk of bleeds. Consensus target ranges are 2 to 3, but there are variations based on the factors noted above.

Patients who are on large numbers of medications are at greater risk for drug interactions even when each medication is individually necessary, and such patients may require more frequent INR monitoring.

INRs should be done no less than every fourth week for SNF patients and more frequently in those at higher risk of bleed. Physicians or their designated coverage, or nurse practitioner or physician assistant coverage shall be available on a timely basis to modify dosing based on INR results.

We ask your assistance in weighing carefully the benefit to risk for each of your patients with atrial fibrillation, or who are on warfarin therapy. We ask as well that you communicate about these important issues with responsible parties, and document your clinical assessment as to what therapeutic course is in the best interest of each of your patients.

Listed below are your patients who are on warfarin and your patients who are listed as suffering from atrial fibrillation.

REFERENCES