

# To Thin or Not to Thin: Anticoagulation in the Very Old

Lynn Collins, MSN, FNP-C



**Ascension**

To Thin or Not to Thin: Anticoagulation in the Very Old

# Disclosures

I have no disclosures

# Introduction

Family Nurse Practitioner

Employment

- Center for Healthy Aging

Education

- 2011 Bachelor of Science, Nursing, Bellin College, Green Bay, Wisconsin
- 2015 Masters of Science, FNP, University of South Alabama

# Objectives

- Identify prevalence & significance of atrial fibrillation
- Discuss common controversies regarding anticoagulation and the elderly
- Explore evidence that supports anticoagulating elderly patients
- Distinguish tools that can be utilized in decision making
- Provide tips for prescribers
- Review the importance of shared decision making

## Case Study

- 89 year old female with PMH AFIB, CAD, HTN, CKD3, Osteoporosis, Severe Macular degeneration (legally blind), and recurrent UTIs
- Persistent Afib x 2 years, not currently on anticoagulation secondary to history of frequent falls
- Most recent fall 15 months ago
- MoCA Blind- scored 18/22
- Ambulates with a rollator
- Lives independently in an apartment
- Has good family support

# Atrial Fibrillation

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## Atrial Fibrillation

- Most common cardiac arrhythmia est 2.7-6.1 million people in US
- 9% of persons age 65+
- Occurs more often in women
- Associated with significant morbidity and mortality
- Responsible for > 750,000 hospitalizations/year and >130,000 deaths/year
- AF independently increases stroke risk by fivefold among the general population and accounts for a greater proportion of strokes with increasing age.
- The risk of thromboembolism in AF increases sharply with age over 65 years, with the relative risk increasing approximately 1.45-fold per decade

# Controversies

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# Controversies Between Anticoagulation and Elderly

- Frailty/Disability leading to falls - *Mobility*
- Elderly patients are underrepresented in RCTs
- Old age increases risk of hemorrhage (CKD, anemia, htn, dm, falls)
- Concern with medication compliance - *Mentation*
- Concern for f/u, lab testing
- Polypharmacy - *Medications*
- Nutritional status
- Over 90 or living in the nursing home

# Anticoagulate

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# Evidence to Support Anticoagulation in the Very Old

- In most cases, the net clinical benefit outweighs the risk, even in the very old
- For those at fall risk, they would have to fall 295 times per year to offset the benefit of oral anticoagulation
- Antiplatelet therapy does not make a significant difference in prevention of ischemic stroke

## Warfarin Versus Novel Oral Anticoagulants

- Warfarin compared to no treatment decreases stroke risk by approximately  $\frac{2}{3}$  and death by  $\frac{1}{4}$
- Warfarin is more effective in preventing stroke than single (aspirin) or dual (aspirin & plavix) antiplatelet therapy
- Warfarin reduces stroke risk by 42% compared to dual antiplatelet therapy with no difference in bleeding
- Warfarin, when compared to aspirin 75mg daily, has a 52% reduction in risk of fatal or disabling stroke, intracranial hemorrhage, or clinically significant arterial embolism
- Warfarin has unpredictable pharmacodynamics, narrow therapeutic window, numerous drug-drug and food-drug interactions, and requires frequent lab monitoring and dose adjustments

## Warfarin Versus Novel Oral Anticoagulants

- NOACS include the direct thrombin inhibitor - Dabigatran (Pradaxa) & the direct factor Xa inhibitors - Rivaroxaban (Xarelto), Apixaban (Eliquis), and Edoxaban (Savaysa)
- Recommended over warfarin in patients with nonvalvular atrial fibrillation
- Improved efficacy and safety ratio
- Predictable effect without the need for routine blood level monitoring
- Fewer food and drug interactions compared with warfarin
- 12% reduction in mortality compared with warfarin
- 20% reduction in stroke or systemic embolism and 50% reduction in intracranial hemorrhage, though there is an increased risk of GI bleeding (Dabigatran & Rivaroxaban)
- Bleeding complications were more benign compared to warfarin
- Phase III NOAC trials included a large number of participants were over the age of 75

# Tools



# Tools to Assist in Clinical Decision Making

- CHADS<sub>2</sub> Score for Atrial Fibrillation Stroke Risk
- CHA<sub>2</sub>DS<sub>2</sub>-VASc Score for Atrial Fibrillation Stroke Risk
- ATRIA Stroke Risk Score
- HAS-BLED Score for Major Bleeding Risk
- ATRIA Bleeding Risk Score
- HEMORR<sub>2</sub>HAGES Score for Major Bleeding Risk

## CHA<sub>2</sub>DS<sub>2</sub>-VASc Score - Case Study

- Age > or equal to 75 +2
- Female +1
- CHF history +1
- HTN history +1
- Stroke/TIA/Thromboembolism history 0
- Vascular disease history (prior MI, peripheral artery disease, or aortic plaque) 0
- Diabetes history 0

Score = 5



## HAS-BLED Score- Case Study

- HTN uncontrolled >160 systolic 0
- Renal disease (Dialysis transplant or cr >2.26) 0
- Liver disease (cirrhosis or bilirubin >2x normal with AST/ALT/AP >3x normal) 0
- stroke history 0
- Prior major bleeding or predisposition to bleeding 0
- Labile INR 0
- Age >65 +1
- Medication usage predisposing to bleeding (aspirin plavix nsaid) +1
- Alcohol use (>8 drinks per week) 0

Score = 2

# Tips

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# Tips When Prescribing Anticoagulation to Elderly

- Start low, go slow
- Adjust for renal function
- Minimize modifiable risk factors for major bleeds (uncontrolled htn, nsaid use, drop in renal fct, suboptimal nutrition, lack of social support)
- Closer monitoring of INR
- Close periodic re-evaluation to assess treatment adherence, need for dose adjustment, and education
- Discuss risk/benefit always - *What Matters?*

# Shared Decision Making

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# Importance of shared decision making

- Involve the patient and/or patient's family in decision
- Discuss risks/benefits
- Use the tools
- Ensure compliance and f/u
- 4 M's

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