

Considerations for Anticoagulant Use in Long Term Care

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Objectives

- Review common anticoagulants and their use in patient care
- Evaluate adverse effects associated with anticoagulants with a focus on the long term care patient population
- Summarize strategies for decreasing the risk of adverse effects of anticoagulants

Anticoagulants

- Also referred to as 'blood thinners'
- Used for patients at significant risk of clotting or those who have been diagnosed with a clot
- Most common indications:
 - Atrial Fibrillation – Abnormal heart rhythm increasing the risk of a blood clot and possible stroke
 - Venous Thromboembolism (VTE) – Blood clot formed in the leg (deep vein thrombosis) and/or lung (pulmonary embolism)

Anticoagulants vs. Antiplatelets

- Anticoagulants
 - Work on the clotting factor cascade
 - Do not directly work on platelet function
 - Used for Atrial Fibrillation and VTE
 - Higher risk of bleeding than antiplatelets
- Antiplatelets
 - Work on platelets and platelet function
 - Do not work on clotting factors
 - Used in coronary disease and stroke
 - Can cause bleeding but lower risk than anticoagulants
 - Examples: aspirin and Plavix

Anticoagulant Treatment vs. Prophylaxis

- Prophylaxis
 - Prevention of blood clot in high-risk patients
 - Usually lower dosing or different route of administration
- Treatment
 - Blood clot formed or high risk of stroke
 - Full doses and higher risk of bleeding



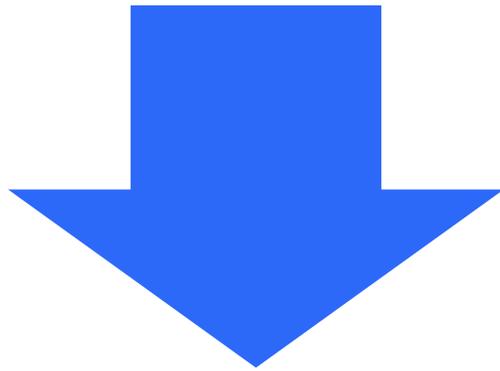
Common Anticoagulants

- Oral Anticoagulants
 - Coumadin (warfarin)
 - Eliquis (apixaban)
 - Pradaxa (dabigatran)
 - Savaysa (edoxaban)
 - Xarelto (rivaroxaban)
- Injectable Anticoagulants
 - Unfractionated heparin
 - Lovenox (enoxaparin)
 - Arixtra (fondaparinux)

Oral Anticoagulants

- Warfarin was standard of care
- Now, newer anticoagulants in a class called Direct Oral Anticoagulants (DOACs) have largely replaced it
- Advantages of DOACs:
 - More effective and fewer adverse effects
 - Fewer drug interactions
 - No need for monitoring

Risks and Benefits of Anticoagulant Therapy



Bleeding and
other Adverse
Effects



Clotting and
Stroke Risk



Risk/Benefit Evaluation

CHADS2 - VASc Score		
C	Congestive Heart Failure	1
H	Hypertension (>140/90 mmHg)	1
A	Age > 75	2
D	Diabetes Mellitus	1
S₂	Prior TIA or Stroke	2
V	Vascular Disease (MI, aortic plaque, etc)	1
A	Age 65-74	1
Sc	Sex Category (Female = 1 pt)	1

Risk/Benefit Evaluation

HAS-BLED		
H	Hypertension	1
A	Abnormal Liver or Renal Function	1 or 2
S	Stroke	1
B	Bleeding	1
L	Labile INR	1
E	Elderly (age > 65)	1
D	Drugs or Alcohol	1 or 2
Maximum Score		9

Adverse Effects of Anticoagulants

- Bleeding!
 - Can occur at any dose but higher risk in treatment dosing
- Medication-specific side effects
 - Injectables – injection-site reaction/bruising
 - Heparin and Lovenox – Low platelet condition called Heparin-Induced Thrombocytopenia (HIT)
 - Pradaxa - Indigestion
 - Warfarin – skin necrosis (very rare)

Strategies for Adverse Effect Prevention

- Ensure medication appropriateness
- Evaluate dosing, especially in patients with kidney disease
- Establish clear monitoring plans
- Review falls risks and implement falls prevention strategies

Case Example

- EW is a 76 year-old female presenting for admission to your facility from home.
- Medical History:
 - Parkinson's Disease
 - Atrial Fibrillation
 - Hypertension
 - Hypothyroidism
 - History of Falls
 - Dementia
 - General Anxiety Disorder

Case Example

Medication List:

- Carbidopa/levodopa 25/100mg 1 tab PO QID
- Levothyroxine 100mcg 1 tab PO Daily
- Lisinopril 10mg 1 tab PO Daily
- Lorazepam 1mg 1 tab PO TID
- Memantine 10mg 1 tab PO BID
- Metoprolol 25mg 1 tab PO BID
- Pramipexole 0.25mg 1 tab PO Daily
- Quetiapine 25mg 1 tab PO daily
- Sertraline 50mg 1 tab PO Daily
- Warfarin 4mg 1 tab PO Daily

Case Example

- Considerations
 - Evaluate risk and benefit of continued anticoagulant
 - Polypharmacy evaluation
 - If anticoagulation continues, consider change to a DOAC
 - Psychotropic evaluation
 - Monitoring plan

Management of Bleeding in Anticoagulation

- If a patient falls, they need to be evaluated
- Other bleeding should be treated with urgency
- Patients may bleed more and for longer than those not on anticoagulants
- After recovery, provider should re-assess risk/benefit of continued anticoagulant use

Summary

- Anticoagulants are commonly used in patients to prevent stroke or treat for blood clots
- Anticoagulants are different than antiplatelets and can be dosed for prophylaxis or treatment
- Bleeding is the most common adverse effect of anticoagulants
- Strategies for minimizing adverse effects include ensuring appropriateness, monitoring, preventing falls, educating staff, and ensuring appropriate dosing
- Managing bleeding in patients on anticoagulation should involve evaluation by a provider

Thank You

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