On-Demand Clinical News

Anticoagulation and Antiplatelet Therapy in the Hospice and Palliative Care Setting

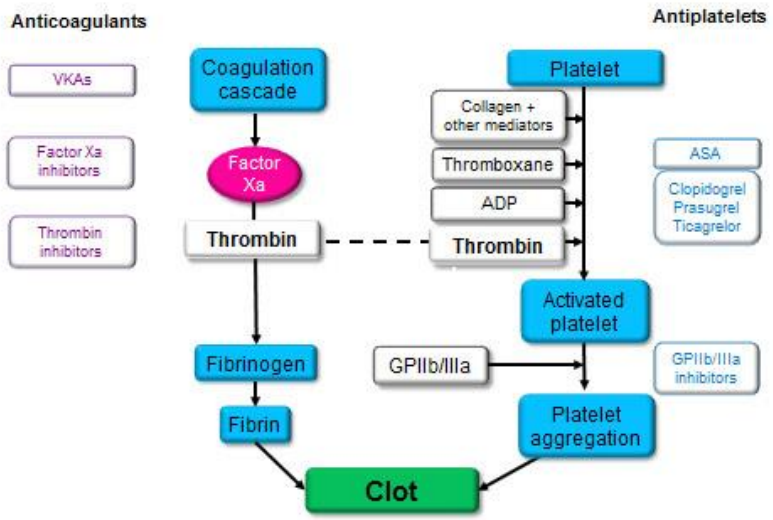
By: H. Paige Erdeljac, PharmD, BCACP

Background & Common Indications

Hemostasis is the process by which the body produces blood clots (thrombus) at the site of vessel injury to stop excessive bleeding or hemorrhage. It's a protective function. The clotting cascade is essential to understanding how the body coagulates to prevent loss of blood. While it is important to protect the body from blood loss, there are instances when anticoagulation or antiplatelet therapy is warranted. Some common indications include, but are not limited to, acute or chronic venous thromboembolism (VTE), atrial fibrillation (AF), hematologic deficiency, heart valve replacement, cardio-embolic stroke, ischemic heart disease, peripheral artery disease, and pulmonary hypertension.

Agents & Cost

The most commonly encountered anticoagulants seen in the hospice and palliative care setting include the vitamin K antagonist warfarin (Coumadin); direct oral anticoagulants (DOACs): dabigatran (Pradaxa), rivaroxaban (Xarelto), apixaban (Eliquis), and edoxaban (Savaysa); and a parenteral low molecular weight heparin: enoxaparin (Lovenox). The most commonly encountered antiplatelets in hospice are aspirin and clopidogrel (Plavix). Each agent has a specific mechanism of action (see picture below).



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Considering Medication Allergies: the Good, the Bad, and the Itchy

By: Jennifer Procaccino, PharmD

A medication drug allergy is an allergic reaction to a medication. With an allergic reaction, the immune system, which fights infection and disease, reacts to the drug. Any medication (over-the-counter, prescription, or herbal) is capable of inducing a drug allergy. In order to understand a medication drug allergy, it's important to review the pathophysiology behind the reaction itself. Allergic reactions can be produced by any of the four immunological mechanisms proposed by Gell and Coombs. The Gell and Coombs's traditional classification divides drug allergies into four pathophysiological types: anaphylaxis (type I), antibody-mediated cytotoxic reactions (type II), immune complex-mediated reactions (type III), and delayed type hypersensitivity (type IV). Although this classification was proposed more than 40 years ago, it is still widely used.

The most frequent types of allergic symptoms to medications are skin rashes (particularly hives), itching, respiratory problems (wheezing), and swelling. More serious reactions involve swelling of lips and the tongue that can cause difficulty breathing. This is known as anaphylaxis. Anaphylaxis is a serious allergic response that often involves lowered blood pressure and, in severe cases, shock. Anaphylaxis-type reactions occur in approximately 1 in 1000 of the general population. If anaphylactic shock isn't treated immediately, it can be fatal.

It's important to note the distinction between a drug intolerance and a drug allergy. A drug intolerance is an unwanted side effect of a drug that is caused neither by the immune system nor by problems with metabolism of the drug.

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Mark Your Calendars!

Join us for an informative Webinar on CMS Mega Rule: Phase 2 Discussion and Q&A, Wednesday, January 17th at 1pm EST.

Use the following link to register: https://attendee.gotowebinar.com/register/2462852557988563713

Recently, several new facility-related regulations and requirements from CMS have gone into effect. Many of our hospice clients have requested assistance with understanding what the new regulations require and more importantly, how those requirements will change the way in which they provide care for their patients. The new rules include changes to how nursing facilities utilize PRN medications as well as how "psychotropic medications" can be prescribed. The definition used for psychotropic medications now include anti-psychotics, anti-depressants, anti-anxiety medications, and hypnotics.

In an effort to help you understand these changes we will be launching an emergency Webinar on Wednesday January 17th at 1pm EST. The purpose of this webinar will be to provide a brief overview of the changes as well as provide a forum for questions and open dialogue. Please use the above link to sign-up for this upcoming webinar and we hope to see you there!

As always, if you have any immediate questions, you can always reach out to your account manager for same-day assistance.

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Common examples of drug intolerance include nausea with opioid medications, such as morphine and codeine, and stomach irritation caused by taking aspirin or NSAIDs.

The most common drugs that cause allergies include penicillin, amoxicillin, aspirin, nonsteroidal anti-inflammatory drugs (ibuprofen and naproxen), sulfa drugs (sulfamethoxazole-trimethoprim) (which is used quite frequently in the hospice populations for various infections), anticonvulsants (carbamazepine, lamotrigine, phenytoin), monoclonal antibody therapy (cetuximab, rituximab), and chemotherapy drugs (paclitaxel, docetaxel, procarbazine). Penicillin is the most prevalent medication allergy, with approximately 10% of patients reporting being penicillin-allergic. However, more than 90% of them are found not to be allergic and are able to tolerate the drug. Amoxicillin is now considered the most commonly consumed and frequent case of anaphylaxis to beta-lactam antibiotics in many countries.

Medications used to treat drug allergies include antihistamines, which are typically the first line of defense in treating drug allergies. They block the immune system chemicals activated during an allergic reaction. They also help to relieve symptoms commonly associated with drug allergies, such as itching or redness. First-generation, or "sedating", antihistamines include diphenhydramine, chlorpromazine, and hydroxyzine. They are effective in reducing the skin lesions and pruritus, but can produce a number of adverse effects, including drowsiness, cognitive effects, and other anticholinergic effects. A second group of antihistamines, known as "low- or non-sedating" antihistamines, was a major advance in the therapy of allergic rhinitis, causing fewer undesirable central nervous system actions since they do not penetrate the blood-brain barrier as rapidly, and are also designed for greater specificity at H1 receptor. Examples include cetirizine and loratadine.

Corticosteroids, administered orally, topically, or injected, may be used to treat inflammation associated with more serious reactions. Several examples of oral corticosteroids include methylprednisolone, prednisone, and dexamethasone. Topical hydrocortisone is most useful for treating dermatologic conditions that cause itching. Finally, epinephrine (adrenaline), a self-injectable medication, is the first-line treatment for the serious and potentially life-threatening allergic reaction of anaphylaxis.

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It should be noted that some of these agents are more cost effective than others. The average cost per dose is listed below (medications in italics are considered preferred/Tier 1 or 2):

- *Aspirin - $0.02*
- *Warfarin (Coumadin) - $0.68*
- Clopidogrel (Plavix)- $6.95
- Enoxaparin (Lovenox) - $5.40 - $27.00
- Dabigatran (Pradaxa) - $7.41
- Apixaban (Eliquis) - $7.76
- Edoxaban (Savaysa) - $12.50
- Rivaroxaban (Xarelto) - $15.50

Common Interactions & Adverse Effects

Caution should be taken when the following medications are stopped or started in a patient taking warfarin: antibiotics, antifungals, amiodarone, antidepressants, antacids, antiepileptics, non-steroidal anti-inflammatory drugs (NSAIDs), and nutritional/herbal supplements. Also note that warfarin is highly protein bound, so if/when the patient's nutritional status declines, they will require adjustments to their warfarin dose, as protein albumin levels will decline.

The DOACs have fewer drug-drug interactions, but it is important to monitor if the patient is concurrently taking p-glycoprotein inducers, strong CYP3A4 inducers or inhibitors, NSAIDs, and nutritional/herbal supplements.

The most common side effects from warfarin, aspirin, and the DOACs are increased risk of bleeding and bruising. Monitoring for increases in bruising frequency and bruise size should be routine for patients taking one of these agents.

Transitions between Anticoagulants

At times, transitioning from one anticoagulant to another may be appropriate. Possible reasons for changing agents could include poor food intake, worsening renal or hepatic function, monitoring burden, and/or cost considerations. Most commonly in the hospice setting, a patient may transition from a DOAC to warfarin due to safety and cost reasons. In general, when transitioning from DOAC to warfarin, the expert consensus is to overlap warfarin with the DOAC, then measure the international normalized ratio (INR) just before next DOAC dose, and stop DOAC when INR ≥ 2.0. Aspirin may be recommended when the patient or family is not ready to stop clot prevention altogether, though it is not always indicated or appropriate treatment. For example, aspirin is not approved or recommended for treatment of VTE. Transitioning from warfarin to aspirin does not depend on INR, but keep in mind that it takes 5-7 days for warfarin's effects to dissipate.

When to Discontinue Anticoagulation

Specific guidance on anticoagulation management in the hospice and palliative care settings is sparse. Each case should take into account patient-specific factors to determine duration and type of anticoagulation. Patient factors to consider include clot burden, stroke risk, bleeding risk, pill/injection burden, testing burden, and ultimately the patient's preferences. The patient's PPS can also give some clues about when to stop an anticoagulant. A patient with a PPS of 60% may be a candidate for continuation, while one with a PPS of 30% might not. However, any patient with 6 months or less prognosis should be considered to have anticoagulation and/or antiplatelet therapy stopped. The absolute risk reduction of a cardiovascular event for patients taking warfarin or aspirin is very small, especially during hospice. For example, over the average hospice length of stay of 17.5 days, warfarin reduced the absolute risk of ischemic CVA in secondary prevention patients with non-valvular AF by only 0.31%, and aspirin by only 0.10%. The risk reduction was even less in primary prevention patients. However, we know the bleed risk in the frail/elderly hospice population is relatively high. Thus, in many if not the majority of hospice patients, the risk of continuing anticoagulants and antiplatelets is generally expected to outweigh potential benefits.

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Upcoming Lunch and Learn Presentations

January: Management of Hepatic Encephalopathy in Hospice and Palliative Care

Presenter: Brett Gillis, PharmD

Dates: Tuesday, January 9, 2018 at 3:00PM ET; Wednesday, January 10, 2018 at 12:00PM ET

February: Pain Management: The Use of Methadone in Hospice and Palliative Care

Presenter: Kiran Hamid, RPh

Dates: Tuesday, February 6, 2018 at 3:00PM ET; Wednesday, February 7, 2018 at 12:00PM ET

RSVP by contacting Suzanne Stewart, Lunch and Learn Coordinator, at:
1-800-662-0586 ext. 3303 or sstewart@procarerx.com.

Missed a Lunch and Learn?

Log onto PHC's website, click on "Resources and Education", "Client Resources" and "Lunch and Learn" to listen to audio and view handouts from previous programs.
(https://phc.procarerx.com/resource/edutools/l-l)

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