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NOAC Interaction Alert

The newer anticoagulant medications or NOACs (Pradaxa®, Xarelto® and Eliquis®) were initially marketed as virtually interaction free, unlike warfarin. An interaction with anti-epileptic drugs (AEDs) was recognized early, but there have been conflicting reports about its reliability. Based on the current information, we have decided to move to limit this combination and pursue other options, where prudent.

The older AEDs; phenobarbital, carbamazepine and phenytoin, can accelerate NOAC metabolism in the liver. The NOACs are broken down by an enzyme called CYP3A4. AEDs enhance its activity. They also can augment P-glycoprotein function. This protein helps eliminate NOACs via the kidneys and intestine. These combined actions often reduce NOAC blood levels, and increase clot potential.

Clinical reports regarding this interaction have been less than clear, however. There are case reports of DVTs and pulmonary emboli. Blood

concentration trials show reduced NOAC levels with some of these drug combinations. Contrary to this, a large study in Taiwan, showed phenytoin plus Xarelto® nearly doubled the risk of a major bleed. Puzzling, but also dangerous.

So...what do we recommend? For residents who swallow well and have good renal function, Pradaxa® is the better, though imperfect, option of the three NOACs. Its primary mode of elimination is via the kidneys, so the metabolic issue in the liver is less important. As we all know, opening Pradaxa® increases absorption markedly, so it can only be given to those who can swallow it whole. Minor complication... phenytoin + Pradaxa® can still be problematic, so we may have to go a different route with that combination.

It is probably best to avoid Eliquis® or Xarelto® with any of the three older AEDs. Where else can we turn? A switch to warfarin may seem reasonable, but many of these residents are former warfarin users who refused venipuncture or had poor INR control. Besides, warfarin feels like a step backwards, though it may be the best choice for some.

Changing the anticoagulant is difficult. Perhaps switching the AED is a better option. Three popular drugs here would be

valproic acid (Depakene® or Epival®), levetiracetam (Keppra®) or lamotrigine (Lamictal®). Each of these drugs has a similar anti-seizure spectrum to phenytoin and carbamazepine, and none interacts with the NOACs.

Switching AEDs in a resident who tolerates their current agent and has been seizure-free for an extended period is a tough choice, especially without the help of a neurologist. Without the ability to easily test NOAC clotting and few opportunities to switch to Pradaxa® or warfarin, it might often be our best approach to prevent a stroke or DVT. Depending on resident factors and concurrent therapy, the difficult choice to continue these meds might be the best one. Our pharmacists will explore all options and make recommendations for the affected residents.

Return from Hospital Reconciliation

To simplify resident readmissions, we now send a reconciliation printout for the resident's chart at the time of transfer. Should the resident return, any additions or discontinuations can easily be shown on the document. Prescriber confirmation can be obtained quickly. There is no longer a need to complete a full reconciliation from scratch. P&P 3.01 has further details and will follow shortly.

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