Quick-reversal method may be at hand for new blood thinner

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Drugs like apixaban have advantages, but risk for bleeding requires rapid antidote, researchers say.

(HealthDay) -- Newer blood-thinning drugs sometimes have one drawback: In cases where they trigger bleeding, their effects can be tough to reverse compared to the standard anticoagulant, warfarin.

Now, a new study finds there are three different approaches to reverse the action of one new blood thinner, apixaban (Eliquis) -- a drug that's currently under review by the U.S. Federal Drug Administration.

Researchers in Spain noted that it remains unclear which method for reversing this new drug might be best.

"If you have an accident or need emergency surgery, doctors have three ways to reverse [the older, standby blood-thinner] warfarin that work in

a matter of minutes to hours. In contrast, there is little information on how best to reverse the effects of newer anticoagulants, which can take 10 to 18 hours," study author Dr. Gines Escolar, an associate professor of hematology at the University of Barcelona, explained in an American Heart Association news release.

Newer blood thinners, such as apixaban and rivaroxaban [Xarelto, already FDA-approved], typically require less frequent blood tests compared to warfarin, have fewer interactions with foods or other medications and have less variation in dosages.

Nevertheless, "despite these advantages, there is one common side effect of all blood thinners that can be severe -- excess bleeding," Escolar explained.

In conducting the study, the researchers added a high dose of apixaban to blood from healthy donors to test the effects of various methods of reversing blood thinners on the new drug. They found that two blood-clotting agents -- prothrombin complex concentrates and activated prothrombin complex concentrates -- were more efficient than recombinant factor VII in reversing apixaban. Recombinant factor VII, however, was the first to produce a blood clot and was also most effective in studies with blood circulating through a damaged blood vessel.

"The good news is that the various lab tests applied indicate that these approaches may reverse the effects of apixaban," Escolar concluded. "But, even with the favorable results in perfusion [restoration of blood flow] studies using a damaged vessel, we're far from knowing what will work best in a bleeding patient. Resolving efficacy and safety issues will require a clinical trial."

One expert in the United States said that determining a quick, safe way

of reversing apixaban would be key to its use.

"Apixaban, which is being considered for use in the prevention of stroke and systemic embolism in patients with [the irregular heartbeat] atrial fibrillation, can be an attractive alternative to warfarin and heparin also used in similar patients," said Dr. David Friedman, chief of Heart Failure Services at North Shore-LIJ's Plainview Hospital in Plainview, N.Y.

"The hope would be for these researchers to next show a safe, effective and quick way to clinically reverse the anticoagulant effects of apixaban on patients with atrial fibrillation who come to the ER with a new bleeding event," he said. If such a method of reversal is confirmed, "clinicians may start to feel more comfortable with the advantages of these newer medicines," he said.

Apixaban has already been approved in Europe for preventing blood clots in adults after knee or hip replacement surgery. The drug is currently under review by the U.S. Federal Drug Administration to prevent stroke in people with atrial fibrillation.

The study, presented in the American Heart Association's Emerging Science Series, was partially funded by Bristol-Myers Squibb, which is developing apixaban.

More information: The U.S. National Institutes of Health has more about blood thinners.