Kent, Surrey and Sussex
Health Policy Support Unit

Anticoagulants for stroke prevention in atrial fibrillation – Patient frequently asked questions

What is atrial fibrillation?

Atrial fibrillation (AF for short) is a condition that affects the heart, causing it to beat irregularly. People with AF may be at an increased risk of blood clots because their heart does not pump blood round the body as efficiently as usual. This means they may be more likely to have a stroke, which can happen if a clot blocks an artery in the brain. Most people with AF will be offered medication known as an anticoagulant (blood thinner) to 'thin' their blood and reduce the risk of clotting. Warfarin is an example of an anticoagulant used to prevent blood clots.

What are dabigatran, rivaroxaban and apixaban and what are they used for?

Dabigatran, rivaroxaban and apixaban are new types of anticoagulants. They are used to lower the risk of blood clots developing in people who have AF and other risk factors for stroke. Dabigatran does this by interfering with a substance in the body (thrombin) that is involved in the development of blood clots. Rivaroxaban and apixaban help by stopping a substance called Factor Xa from working. Whereas these new anticoagulants work by stopping only one blood clotting substance, warfarin works by interfering with a wide range of substances. Medications (such as aspirin) that stop platelets from working are not anticoagulants.

Dabigatran, rivaroxaban and apixaban have only been approved for use in patients with non-valvular atrial fibrillation (where the patient does not have rheumatic valve disease, a mechanical heart valve or a valve repair).

Which is better, dabigatran, rivaroxaban or apixaban?

Dabigatran, rivaroxaban and apixaban have not been directly compared to one another in the same clinical trial, so it is not possible to say which one is better. They share some of the same advantages and disadvantages compared to warfarin, but because they work slightly differently, they also have some unique characteristics that make them better suited for different types of patients. Your doctor will prescribe dabigatran, rivaroxaban, apixaban or warfarin after discussing with you, your individual needs.

How often do dabigatran, rivaroxaban and apixaban need to be taken?

Dabigatran and apixaban are taken twice a day. Rivaroxaban is taken once a day.

For patients with atrial fibrillation, is it worth changing from warfarin?

Warfarin has been prescribed for more than 50 years so there is plenty of experience of its clinical use. It is highly effective in preventing stroke in people with atrial fibrillation; for patients whose condition is well controlled on warfarin it may not be advisable to change. For patients who have poor anticoagulant control, a switch to dabigatran, rivaroxaban or apixaban might be considered.

Is it better for patients who are newly diagnosed with atrial fibrillation to start taking the newer anticoagulants (dabigatran, rivaroxaban, apixaban) rather than warfarin?

Many people do well on warfarin and it may be prescribed after considering individual bleeding risk and stroke risk factors. Dabigatran, rivaroxaban or apixaban might be considered depending on your individual needs or if subsequent problems with anticoagulant control develop; for example, if it is difficult to get the full benefits of warfarin therapy, a patient has an allergy to warfarin, or has intolerable side effects from warfarin.

Are the new anticoagulants better at reducing the risk of stroke than warfarin?

Warfarin is highly effective in preventing stroke in people with atrial fibrillation. In clinical trials, dabigatran (at a dose of 150 mg twice daily) and apixaban, both reduced the risk of stroke slightly more than warfarin did. Rivaroxaban was not worse than warfarin at reducing the risk of stroke, but did not appear to be better either. The risk of stroke with dabigatran (at a dose of 110 mg twice daily) was similar to warfarin.

Do the newer anticoagulants cause less bleeding than warfarin?

As all anticoagulants affect blood clotting, patients may experience side effects such as bruising and bleeding. Overall, apixaban and dabigatran (at a dose of 110 mg twice daily) caused less major bleeding than warfarin in clinical trials, but when warfarin was used well and anticoagulant control was very good, these benefits were less clear.

Intracranial bleeding (bleeding into the brain) is worrying because it is usually very serious. In clinical trials, dabigatran, rivaroxaban and apixaban all caused less intracranial bleeding than warfarin.

Gastrointestinal (stomach and bowel) bleeding is also a concern as it varies widely in terms of severity and is more common. In clinical trials, severe gastrointestinal bleeds occurred more often with dabigatran (at a dose of 150 mg twice daily) and rivaroxaban than with warfarin.

The risk of bleeding on dabigatran and rivaroxaban appeared to increase with increasing age in clinical trials. Your doctor will balance this increased bleeding risk with the risk of stroke, since this also increases with age if left untreated.

If a patient has excessive bleeding, can the anticoagulant effect of dabigatran, rivaroxaban or apixaban be reversed?

There is currently no antidote for dabigatran, rivaroxaban or apixaban. However, if urgent treatment is required, dabigatran, rivaroxaban or apixaban will be discontinued and supportive measures will be started. It is easier to manage major bleeding in patients on warfarin.

Are the newer anticoagulants associated with any side effects or other safety issues?

All anticoagulants are associated with side effects. In clinical trials, more people stopped taking dabigatran or rivaroxaban than warfarin. Fewer people stopped taking apixaban than warfarin in clinical trials. Dabigatran caused more gastrointestinal symptoms than warfarin (e.g., indigestion, stomach ache), and also appeared to slightly increase the risk of heart attacks. Rivaroxaban caused more nose-bleeds and haematuria (blood in urine) than warfarin.

Are dabigatran, rivaroxaban and apixaban suitable for monitored dosage systems[1] (such as the Boots MDS, Nomad, Dosette, Medidos and Venalink systems)?

Rivaroxaban and apixaban are suitable for monitored dosage systems. Dabigatran is not suitable for monitored dosage systems, because the capsules are moisture sensitive and must be swallowed whole immediately after they are removed from their packaging. Warfarin may not be suitable for monitored dosage systems in all cases; for example in patients for whom the dose of warfarin needs to be increased or decreased frequently in order to maintain a good level of anticoagulant control.

What happens if I miss a dose of dabigatran, rivaroxaban or apixaban?

Your doctor will tell you what to do if you miss a dose, but do not take a double dose to make up for a missed dose.

It is important that you take your regular dose as agreed with your doctor. If you find it difficult to take your regular dose, dabigatran, rivaroxaban or apixaban may not be the right solution for you. This is because the protective effect against strokes wears off quicker after taking the newer anticoagulants than it does after taking warfarin. Warfarin stays in your system for longer, so that even if you miss a dose, you will have some protection against the risk of a stroke.

[1] This term describes a range of medicines storage devices divided into compartments to make the administration of solid oral medication simpler. They are designed to make it more convenient for the patient who is self-administering to manage their medicines and act as a visual reminder with regard to whether the medications have been taken or not.

Will dabigatran, rivaroxaban or apixaban interact with other medicines, food or alcohol?

Dabigatran, rivaroxaban and apixaban have fewer potential interactions with other medicines compared to warfarin, and at present there are no known interactions with specific foods or alcohol. There are some medicines that dabigatran, rivaroxaban and apixaban do interact with, so patients should inform their prescriber and pharmacist of the names of all medicines they are taking (including prescription and over-the-counter medicines, vitamins and herbal supplements such as St John's wort).

Are regular blood tests needed to monitor dabigatran, rivaroxaban or apixaban levels?

There is no need for regular blood tests to measure the level of anticoagulant control with dabigatran, rivaroxaban or apixaban. However, a blood test is needed to measure how well the kidneys are working before starting treatment with dabigatran and then at least once every year while on dabigatran treatment, depending on your individual needs. This is because the risk of bleeding on dabigatran increases as kidney function declines. Warfarin, rivaroxaban and apixaban are less affected by poorly functioning kidneys than dabigatran, but your doctor may still want to monitor your kidney function if you are taking rivaroxaban or apixaban, depending on your individual characteristics.

Should patients stop taking dabigatran, rivaroxaban or apixaban if they are going to have a dental or medical procedure?

Patients should always tell their healthcare professional (doctor, dentist, nurse or pharmacist) that they are taking anticoagulants. Patients should not stop taking dabigatran, rivaroxaban or apixaban without first talking to their doctor or dentist. Dabigatran, rivaroxaban or apixaban may need to be stopped for one or more days before any planned surgery, dental or medical procedure.

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