



## Anti-Coagulation

### To clot or not to clot that is the question?

The charity regularly receives questions about anti-coagulation therapy. We thought that it might be helpful to explain why many children need this treatment and what you as parents need to be aware of to ensure that your children are safe whilst taking this sort of medication.

### What is anti-coagulation?

Anti-coagulation is a medication that is given to slow down the blood's ability to clot (form a scab inside the body).

Sometimes when a child has a heart condition their blood passes through their hearts slowly, sticking to areas in the heart where surgery has been done or where artificial tubes or valves have been added.

If clots (scabs) of blood form within the heart or the blood stream they can cause severe damage within the lungs, brain or the heart itself.

### What drugs are anti-coagulants?

**Aspirin** slows blood clotting by reducing the stickiness of red blood cells; its correct title is an antiplatelet drug. It can be taken by mouth.

**Warfarin** is the most commonly used anti-coagulant, it works on all the blood's mechanisms for forming clots but doesn't affect the red blood cells. It can also be taken by mouth.

During a treatment period in hospital Heparin might be given as an infusion intravenously but this drug cannot be used orally (by mouth).

### Why does the level of Warfarin have to be checked?

The role of Warfarin is to slow down the blood's ability to clot but it would be dangerous to stop clotting altogether as this would lead to uncontrolled bleeding if there was an accident.

Different children need different amounts of Warfarin to keep their blood levels stable. Not all the dose of Warfarin is used up every day so it can

accumulate (collect up), this needs to be monitored with a blood test until each child's level of the drug becomes stable.

Different things can affect the drug levels, for example, an infection, becoming dehydrated or natural growth so although testing will become less frequent it will always be important to check the drug levels.

Children on Aspirin do not need testing as the entire drug is used up each time and it has a milder anti-coagulant effect.

### **What problems do I need to be aware of if my child is receiving anti-coagulation?**

Aspirin has a mild anti-coagulant effect but care must be taken when giving the drug as it can cause the stomach lining to become inflamed. To help prevent this always give aspirin after a meal or with a glass of milk. You may notice a little more bruising if your child falls over and they may bleed longer if they cut themselves but normal wound care will stop the bleeding.

Warfarin is a strong anti-coagulant, which needs regular monitoring, see above. If a child receiving this drug falls over they will bleed for longer than normal so firm pressure must be applied to the cut, gradually the bleeding will stop and then a plaster needs to be applied. You will notice marked bruising if children knock themselves whilst playing. If they should fall from a height or if they should hit their head even if you are unable to see any bleeding you must seek medical help as they could be bleeding internally.

### **Why are some children not on any anti-coagulation?**

It may seem unfair that some children are on Warfarin and others are not. It is important to remember that not all children need anticoagulation. Each treatment centre will have different surgical protocols and techniques, if your child has been prescribed the therapy it will be because their doctors feel that they have a risk of clotting.

### **Who needs to know about this medication?**

It is important to tell any of your children's carers about the risks of bleeding, so schools, playgroups or child sitters should know what to do if your child cuts themselves or falls off equipment in the playground.

To ensure that your child is safe even if you are not with them a Medic Alert bracelet can be useful in an emergency, as it will hold information about the heart condition and any drug therapy.

If you have any further questions about these drugs or why your child has been prescribed them talk to your cardiologist next time you are in clinic or ring your Cardiac Liaison Sister.