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| **Module** | Anticoagulation management: patient’s guide to self-monitoring |
| **Topic** | The adverse effects of warfarin |
| **Audience** | Self-monitoring warfarin patient |
| **Type** | Core content |
| **Version** | 3 |

**1. Introduction**

The aim of this topic is to give you a practical understanding of the adverse effects of warfarin

By the end of this topic you should be able to:

1. Identify the most common adverse effects of warfarin
2. Identify evidence of bleeding
3. Describe the action to be taken if you notice evidence of bleeding
4. State if warfarin can be taken in pregnancy or whilst breast-feeding
5. Describe what you need to do if you are having surgery or a dental procedure

**2. Check your understanding**

Before you start reading this topic check how much you already know by taking a short quiz. You will have an opportunity to take the quiz again at the end of the module, where we will reveal the correct answers.

a) Which of the following are adverse affects associated with warfarin? (Select all that apply)

1. **Nose bleed**
2. **Skin rash**
3. Dry eye
4. **Blood in your urine**
5. **Hair thinning**

b) Which of the following can be evidence of bleeding? (Select all that apply)

1. **Black, tarry stools**
2. **Severe headache**
3. **Pink or brown urine**
4. **Severe bruising**

c) If you notice a little bit of blood whilst brushing your teeth you should go straight to your nearest Emergency Department

True / **False**

d) You have had a severe headache over the last few days. What should you do? (Please select the response that best answers this question)

1. You do not need to do anything
2. Take a pain killing medicine (e.g. paracetamol tablets)
3. Discuss it with your anticoagulant practitioner when you are next due an INR test
4. **Go straight to your nearest Emergency Department**

e) You notice that you have black, tarry stools. What should you do? (Please select the response that best answers this question)

1. You do not need to do anything
2. Take a laxative (e.g. senna tablets)
3. Discuss this with your anticoagulant practitioner when you are next due an INR test
4. **Go straight to your nearest Emergency Department**

f) If a woman takes warfarin in early pregnancy, it can damage the unborn child

**True** / False

g) A woman who takes warfarin should not breast-feed her infant

True / **False**

h) You should stop your warfarin 48hours before a dental extraction

True / **False**

**3. What do we mean when we talk about the adverse effects of a medicine?**

The **adverse effects** of a medicine are its unwanted effects. These are also known as **side effects, adverse events** or **adverse reactions**. All medicines can potentially have adverse effects. However, a medicine is only made available if studies have shown that its benefits outweigh its risks.

**4. What are the adverse effects of warfarin?**

Some adverse effects of warfarin may only be an inconvenience whilst others can be more serious. As everyone’s reaction to a medicine is different, it is difficult to predict how an individual will react to a medicine.

It is important that you can recognise the serious adverse effects of warfarin. The side effects of warfarin fall into two broad groups: **bleeding side effects** and **non-bleeding side effects**. These will now be considered.

**5. How would I know if I am experiencing bleeding from warfarin?**

Bleeding is the most common adverse effect of warfarin. It can be a sign that your dose of warfarin is too much for you.

As warfarin slows down the rate at which your blood clots, if you cut yourself it may take longer for the bleeding to stop. Equally, if you knock yourself, **bruises** may be larger and take longer to heal. This is quite normal. **Nose bleeds** and **bleeding gums** can be a problem for a minority of people.

The most serious adverse effect of warfarin is severe bleeding. You can reduce your risk of severe bleeding by monitoring yourself for evidence of bleeding.

**POINTS TO PONDER**

How would you know if you were having a severe bleed? Try to list the signs of bleeding. Then click on ?? below to see how many you were able to list.

* Prolonged nosebleeds (more than 30 minutes)
* Blood in your vomit
* Blood in sputum
* Passing blood in your urine (pink or brown pee)
* Passing blood in your faeces (Black ‘tar-like’ bowel movements that are foul-smelling)
* Severe or spontaneous bruising
* For women, unusually heavy bleeding during your period or any other vaginal bleeding
* Severe, unusual headache, dizziness, fatigue or weakness.
* Severe bleeding from gums
* Severe bleeding from a small cut (more than 30 minutes)

 **Evidence of severe bleeding**

**6. What should I do if I notice evidence of bleeding?**

If you notice any evidence of bleeding it is important that you know what to do. The recommended actions to take are summarised in the box below.

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| **Sign** | **Course of action** |
| Bleeding from a small cut | Apply firm pressure to the site for at least five minutes using a clean, dry dressing.Seek immediate medical attention if bleeding does not stop |
| Nose bleed | Sit down and firmly pinch the soft part of your nasal cavity, just above your nostrils. Lean forward and breathe through your mouth; this will drain blood down your nose instead of down the back of your throatMaintain the pressure on your nose for up to 10 minutes (time this on the clock) so that your blood clots. If necessary, place a covered ice pack on the bridge of your nose.Repeat if necessary. If bleeding does not stop after 30 minutes seek immediate medical attention. |
| Frequent nose bleeds | Inform your anticoagulant practitioner. |
| Bleeding gums |
| Unusual bruising (bruises that develop without a cause, or bruises that are growing) |
| Any evidence of severe bleeding listed in Box A (e.g. passing blood in your urine) | See IMMEDIATE medical attention, visiting the nearest Emergency Department if necessary. |

**Recommended actions to take if you notice evidence of bleeding**

*(Could this be presented in a Q&A style / MCQ … i.e. If I was bleeding from a small cut I would …)*

Your anticoagulation practitioner may also give you advice on what to do if you notice any bleeding.

**7. What are the other adverse effects of warfarin?**

Other adverse effects people have reported with warfarin are listed below:

* Gastro-intestinal disturbances (e.g. indigestion, nausea)
* Skin reactions
* Alopecia (hair thinning and loss)
* Tiredness
* Intolerance to cold

**Other side effects associated with warfarin**

If you are experiencing problems with your warfarin you should speak to your anticoagulation practitioner. **Allergic reactions** to warfarin are rare.

Finally, there are two extremely rare adverse effects that can happen at the start of treatment. Firstly, a painful skin discoloration, known as **skin necrosis**, which occurs within six days of starting warfarin. Secondly, a purple discoloration of the toes, known as **purple toes syndrome**, which occurs 3 – 10 weeks after starting warfarin. If you notice either of these effects at the start of treatment, you should seek immediate medical attention.

**8. What if I would like to become pregnant?**

*(image - 118\_MP900448533.JPG)*

Warfarin can affect the development of a baby in early pregnancy, causing birth defects. It can also increase the risk of bleeding in the mother and newborn.

Therefore, where possible, you should discuss plans for future pregnancy with your doctor before trying to conceive.

 If you who think you may have become pregnant whilst on warfarin you should perform a pregnancy test as soon as possible and, if this is positive, seek an urgent appointment with your doctor.

**9. What if I would like to become pregnant or breast-feed my baby?**

*(image - 118\_MP900308946.JPG)*

As warfarin does not pass into breast milk, it is safe to breast feed while taking warfarin.

**10. What should I do if I have surgery planned?**

*(image … surgeon.JPG)*

If you have surgery planned, your surgeon or their team will advise you about your anticoagulation. They usually do this at your surgery pre-assessment appointment.

Their advice will depend on how invasive the surgery will be, your risk of clotting and your risk of bleeding. You may need to stop your warfarin for a few days before the procedure. If you have a higher risk of clotting, you may be asked to use heparin injections for a short period before and after the procedure.

**11. What should I do if I have dental work planned?**

If your INR is less than 4.0, you should not have to stop or reduce you dose of warfarin before a routine dental procedure. Although continuing warfarin may increase your risk of bleeding, this is felt to be less than your risk of developing a clot if your had stopped your warfarin.

You should check your INR checked no more than 72hours before your planned dental procedure (ideally 24hours before). After the dental procedure, your dental surgeon should give you clear instructions on how to manage the clot after surgery.

You may need to referred to a specialist dental hospital for treatment if you fall under any of the categories below:

1. You are kept at an INR > 4.0
2. You have very erratic INR control
3. You have a condition that affects blood clotting or bleeding (e.g. liver impairment)
4. You are taking cytotoxic medication

**DEMONSTRATE YOUR UNDERSTANDING**

Finally, please try to answer the questions at the start of this topic again