



Intravenous regional Guanethidine block – patient information

What is a Guanethidine block?

Guanethidine is a drug which is usually used to control blood pressure and has a specific effect on the sympathetic nerves in the body. Guanethidine is also a recognised treatment for persistent pain and has few risks associated with its use.

The sympathetic nervous system forms part of the autonomic nervous system which is responsible for the control of bodily functions that we don't have to think about. This includes our heart rate, digestion and blood pressure. For reasons unknown, the sympathetic nervous system can become stimulated and transmit pain following an injury (the injury itself may be minor or major). This may result in a condition known as Complex Regional Pain Syndrome (CRPS), formally known as Reflex Sympathetic Dystrophy (RSD) or Causalgia or Sudeck's Atrophy. Symptoms of CRPS may include severe burning pain, swelling, and skin colour change.

A Guanethidine block is used to treat pain conditions which affect a limb (this may be an arm or a leg). Guanethidine, along with local anaesthetic, is injected directly into a vein (blood vessel) in the affected limb and can temporarily block the nerves in the arm or leg (particularly the sympathetic nerves) and prevent them from sending pain messages to the brain.

What happens during an intravenous Guanethidine block?

This procedure is performed by specialist staff with your blood pressure and oxygen level monitored closely throughout the procedure. The doctor will place a small cannula (a small plastic tube) into a vein in your hand or your foot depending on the area being treated. A second cannula is also be placed in the back of the hand or arm (if you are having an injection in an arm this will be in the other hand/arm) in order to treat potential side effects of the medication such as low blood pressure.

A tourniquet or pressure cuff (similar to a cuff used to take your blood pressure only larger) is applied above the cannula so that the Guanethidine is only administered into the area affected by pain - the tourniquet/pressure cuff is used to prevent the drug from reaching other parts of the body. The tourniquet is blown up to level which is tight enough to ensure Guanethidine stays only in the affected limb. A tourniquet may be safely used for two hours at a time and is usually only required for approximately 30 minutes for a Guanethidine block.



Once you are in a comfortable position on the procedure table the pressure cuff will be attached to the upper part of the arm or leg being treated and your limb will then be elevated for a few minutes. The pressure cuff will then be inflated with air until it is tight. This may cause you some discomfort and numbness in the limb but will not usually increase your pain. The Guanethidine and a local anaesthetic solution will then be injected into the cannula in the arm or leg. The limb may feel numb and you may notice it becoming blotchy and white. This is expected and is completely normal.

You are then asked to rest for around 20 minutes while the Guanethidine and local anaesthetic spreads to the tissues of the arm or leg being treated. Following this time the tourniquet/pressure cuff will be deflated and you may notice a warm tingling feeling in your limb. Some patients will experience some pins and needles and it is best to rest the arm as moving the limb can increase this sensation.

What happens after the Guanethidine block?

The injection will take approximately 30 minutes. You will need to remain in hospital for two hours following the procedure. Nursing staff will continue to monitor your blood pressure and heart rate during this time and will let you know when you are ready to be discharged home.

Following a Guanethidine block you may notice that the limb is rosy in colour and you may experience some numbness and weakness. If the injection was into your leg you may require assistance from nursing staff when you first get out of bed. If the numbness/weakness is prolonged you will need to remain in hospital for a longer time or overnight. A small dressing may be applied to the injection site and this may be removed after 24 hours.

Following your procedure you must:

- arrange for an adult to escort you home by car (you cannot drive for 24 hours after your procedure)
- arrange for an adult to be present with you for 24 hours following your procedure

The local anaesthetic will wear off within a few hours however the effect of the Guanethidine blockade of the sympathetic nerves may last for many hours to days.

If the first injection reduces your pain significantly then you may undergo more injections to increase the duration of the pain relief. The amount of injections required varies from person to person but generally the duration of relief increases after each injection.