



Use of Botulinum Toxin (Botox) in bladder conditions

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In which urinary disorders has this been useful?

Botulinum Toxin (known widely as the brand name botox) has been successful in treating a condition called overactive bladder which can cause urinary incontinence. Overactive bladder can be idiopathic (a condition of unknown cause) or can be caused by multiple sclerosis, strokes, Parkinsons disease and other neurological conditions.

Botulinum Toxin is not used to treat stress urinary incontinence.

What is Botulinum Toxin?

The medication commonly called Botox (or Botulinium Toxin A) is a purified toxin made from bacterium. As such this is a toxic product but its use has been used in a variety of medical conditions for many years very successfully. The first medical use was started in the 1960s and it was subsequently approved for use in the US in 1989. The first European approval was granted in 1992. More recently it has been found to be beneficial in patients suffering from overactive bladder. This treatment is not licensed in the United Kingdom for the use of overactive bladder but is increasingly used in specialist centres such as the Queen Elizabeth Hospital Birmingham to treat this condition.

How does it work?

Botulinum Toxin works by binding to the nerve endings of muscles, blocking the release of a chemical (acetylcholine) that causes the bladder muscles to contract involuntarily. When injected into specific muscles they become paralysed or weakened, but leaves surrounding muscles unaffected, allowing normal muscle function. This in turn prevents involuntary bladder contractions, with the intention of relieving your bladder symptoms which will typically include frequency, urgency and sometimes incontinence of urine.

Why has my doctor recommended Botulinum Toxin injection for my bladder condition?

You will already have been diagnosed with an overactive bladder and have tried other treatments including medication and behavioural treatment in the form of bladder training which has not helped you or was not well tolerated due to the side effects of the medication. You must have tried these more established treatments before undergoing Botulinum Toxin injection into the bladder.

Are there any alternatives to Botulinum Toxin?

The alternatives to Botulinum Toxin are medications or bladder training, these will have been unsuccessful or not tolerated if you have been offered Botox.

There are other procedures such as neuromodulation or open surgery (clam cystoplasty) which may be recommended in some cases.

- **Clam cystoplasty** is a major operation, it involves cutting open the bladder – like a clam and sewing a patch of intestine between the two halves. The aim of the surgery is to increase bladder capacity and reduce the instability.
- **Neuromodulation or sacral nerve neuromodulation** uses continuous stimulation and close nerve contact. This requires surgical implantation of a pulse generator and electrode. The aim of sacral neuromodulation is to relieve bladder symptoms by rebalancing voiding control. This type of treatment is currently only available in specialist centres.

So what does the procedure involve?

You will come into hospital on the morning of the procedure and there are no dietary or fluid restrictions. The procedure is performed in theatre under a local anaesthetic so you will be awake. The treatment is carried out using a special telescope

(cystoscope) which is introduced through the urethra (waterpipe) which means no surgical incision is required and the bladder is injected into 20–30 sites. The procedure takes approximately 30 minutes. You will be discharged home after you have passed urine.

Are there any side effects?

The use of Botulinum Toxin is safe but some patients do suffer from the following side effects:

- **Urinary retention** (inability to pass urine). You may be taught a technique called clean intermittent self catheterisation prior to the procedure so that if you do experience problems with urinary retention you will know how to deal with it. Urinary retention usually only lasts for a matter of weeks but there have been rare cases of it being a long standing problem
- Urinary tract infection
- Slight haematuria (blood in the urine)
- Botox is a toxin and there is a theoretical risk of it causing various muscle weaknesses
- Flu like symptoms

How long will the benefits last?

The effects of the injection are seen at about 7 to 21 days after the injection is given and it normally lasts between 6 to 10 months. You may need a repeat treatment if your problem remains persistent.

If you have any queries before or after this procedure please contact:

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