Patient information from Gordon Muir, Consultant Urological Surgeon

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Intravesical Botulinum Toxin (Botox®)

Botulinum toxin can be used for patients with bladder over activity, who do not have obstruction to the outflow of the bladder.

In general terms we will usually try oral medication called anti-cholinergic drugs prior to moving on to Botulinum toxin, although in some patients (for example those with severe glaucoma), Botulinum toxin may be a primary treatment.

How is the Botulinum toxin given?

Usually we give Botulinum toxin as an outpatient procedure under local anaesthetic. The patient will be invited to lie on an examination couch and, after injecting some local anaesthetic jelly into the water pipe, a flexible cystoscope is inserted into the urethra.

For women this is generally a painless procedure but some men may experience some discomfort as the telescope passes through the prostate gland.

A small flexible needle is then passed down the telescope and the Botox is injected into around 20 different spots in the bladder. Each of these injections is a small pin prick which generally does not cause any specific pain other than a mild pushing sensation; some patients, however, may find the procedure uncomfortable and may elect instead for general anaesthesia.

Once the patient has had the procedure, he or she gets dressed, passes urine and is then able to go home.

What benefits can be expected?

Around 75% to 80% of patients can expect a significant improvement in their bladder overactivity following the Botulinum toxin injection. It should be noted that the Botulinum toxin does not work immediately and it can take up to two weeks to have a significant effect, although most patients will see a benefit within 4 to 5 days.

The need for re-treatment is not yet established. In most cases it seems that patients will need to have a re-treatment after 6 to 12 months and this may be a long-term recurring requirement, but it appears that for some patients a single injection may give a much longer benefit than this. At present it is not possible to predict who will have a longer term outcome or indeed who is likely to have a good response in the first place.

What side effects are there?

As with any minor urological endoscopy, bleeding, infection and some discomfort may be noted. Should you have any fever, shivering attacks or severe blood or persistent blood in the urine following the procedure it is important to contact the office, or hospital, if out of hours.

The major potential side effect with Botulinum toxin injection to the bladder is the possibly of voiding dysfunction and around one in 20 patients will have difficulty passing urine following the operation. If this does happen, then intermittent catheterisation may be necessary for a number of weeks until the bladder function begins to recover.

In some men who have a degree of bladder outflow obstruction, the risk may be higher and if you are in this category, then this would have been discussed with you in detail prior to the treatment.
While there is a theoretical danger of the Botulinum toxin being absorbed into the circulation and affecting the respiratory and other muscles, this has not been observed except in one single case where a large amount of Botulinum toxin was injected in a single injection, so it appears a theoretical rather

than a practical risk. While it may be that over time patients become less sensitive to the Botulinum toxin, this has not so far been the experience in the cosmetic or urological field.

What are the alternatives to Botulinum toxin?
One option is to continue on higher doses of anti-cholinergic medication or to accept a degree of incontinence.

Surgery to increase bladder capacity and decrease over activity is very effective but involves either major surgery to insert bowel segments into the bladder, and extend the capacity or to strip the bladder muscle from the bladder resulting in a floppy bladder.

Other options such as neuromodulation may have a place to play and these will have been discussed with you as an alternative to the use of Botox. Surgical solutions do give a more permanent solution but at somewhat greater risk in the short to medium term.