Botulinum Toxin A (Botox) in the Treatment of Refractory Detrusor Overactivity

Introduction

Urinary incontinence is a major health problem and affects more patients than diabetes and heart disease combined. This means many millions of patients, a lot of whom suffer in silence. This can severely affect their quality of life and restrict activities such as shopping, travelling and sports. An **overactive bladder** is caused by an overactive detrusor ("bladder") muscle. It tenses up without warning, even when you don't want it to and when your bladder isn't full. Thus you can experience a sudden desperate urge to "go" and sometimes can't get to the toilet quickly enough. It can occur at any age and is more common in women especially those who have had previous surgical operations on the pelvic organs (bladder, uterus and bowel). Bladder infections and bladder stones can cause it. Sometimes it is a consequence of a stroke or the disease multiple sclerosis, but in most cases it is not possible to find a reason why the bladder becomes overactive. Most overactive bladders respond to physiotherapy or drug treatment but when tablets to calm the bladder down are ineffective or cause side effects such as dry mouth and constipation, until recently, other than major surgery, there has been little to offer when tablets fail. Botulinum toxin A (Botox) has emerged as a new, minimally invasive and highly effective treatment for overactive bladder that has failed treatment with tablets. Botox is used to relax muscle tissue and has been used medically for over 20 years. Only recently has it been used to relax the detrusor muscle of the bladder leading to a reduction in urinary frequency, urgency and incontinence.

Before BOTOX treatment

1. Patients are recommended to have Urodynamics

2. Detrusor over-activity must have been diagnosed on Urodynamic Testing.

3. Conventional treatments must have been unsuccessful or inappropriate.

4. There must be no contraindications to Botox treatment such as Myaesthenia Gravis, Motor Neurone Disease, pregnancy or breast-feeding.

5. Be able to self catheterisation, or at least understand the concept and be willing to learn in the event that you are one of the up to 10% of patients who can experience urinary retention or difficulty fully emptying your bladder as in the short term. You will be given an appointment to see the Urology Nurse to discuss this further if necessary.

6. You need a clear urine test and bladder diary completed.

What is involved in the procedure?

This is a day case procedure done under local anaesthetic. Local anaesthetic gel is applied to the area around your urethral opening, up your urethra and into your bladder and a solution of local anaesthetic is instilled for 20 minutes via a catheter prior to your procedure. A telescope and camera is inserted into your bladder via your urethra and your internal bladder surfaces are inspected. The BOTOX is then injected into multiple sites your bladder wall via a special needle passed through the telescope directly and then your bladder is emptied. Some minor discomfort with injection is normal but very short lived. If you are having difficulty with discomfort some sedation or twilight anaesthesia can be given. You will be given antibiotics.

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What can I expect after the operation?

You will be given a Ural sachet and dose of Panadol. If pain medication is required, Panadol should suffice. You will be able to eat and drink shortly after the treatment, and should be able to go home once you have passed urine, or self catheterised if you do this normally. You will be given a course of an antibiotic to take at home to reduce the risk of infection before and after the operation for a total of 7 days, starting three days before the procedure.

At two weeks you will visit the Urology Nurse to have your flow and emptying checked (unless you already do regular ISC in which case, you will get a phone call from the nurse). Improvement in your symptoms should be seen within seven days of the injection and should continue for between four and nine months. After this if symptoms start to return one of the anticholinergic drugs will be recommended; they seem to be very effective after Botox. Further Botox can be given at a minimum of 6 months after the initial injection, although 12 months is more ideal, and repeat injections appear to be equally effective.

Complications

There are few reported side effects with Botox. Flu like symptoms (rare) settle quickly in a few days. Muscle weakness e.g. in the legs can occur but resolves in weeks, rarely months. Allergy to Botox is very rare. In disabled children if Botox reaches the blood stream, breathing difficulties have been seen but this is extremely rare in the use in bladder. (You should be aware but not alarmed at this advice, the overall risk of Botox injected in the bladder causing life threatening complications is extremely low. This means Botox comes with a "Black Box" warning)

The common side effects are the effect on bladder emptying and retention, blood in the urine and urinary tract infection – take the antibiotics that you have been given.

Some patients (<10%) have difficulty passing urine when Botox takes effect. You may notice a slower or difficulty emptying or the feeling of an infection (e.g frequency, burning). Contact the nurse in this event. Sometimes going to the toilet twice is enough. Only occasionally you will need to empty your bladder with self catheterisation.

Follow up

You will be given a post-operative sheet of instructions.