You have been booked for a

BOTULINUM TOXIN (BOTOX) INJECTIONS INTO THE DETRUSOR

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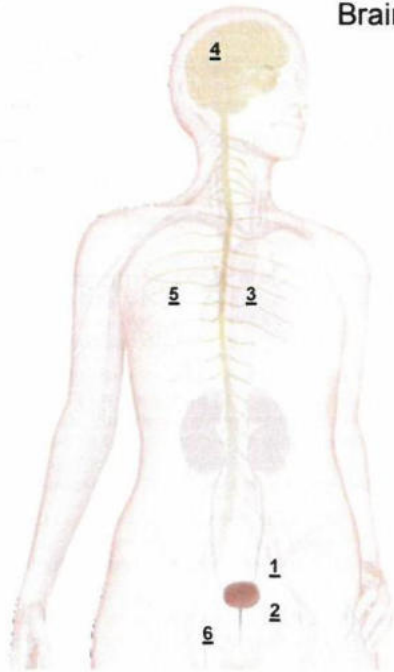
INTRODUCTION

The Bladder store urine and release it in an appropriate time and pace. When the urine in the bladder reaches a certain level, when it is full, the bladder sends a message to the brain, and you feel the urge to “go”. At this point, men or women with a healthy bladder can choose to empty the bladder when they are ready.

There are several conditions, neurological or non-neurological, that can interfere in the conduction of the message between the brain and the bladder. As a result, the bladder muscle may become overactive, leading to leakage of urine (urine incontinence) that you cannot control.

Brain-Bladder Communication



1.- Bladder fills up an stores urine

2.- Bladder stretches

3.- Spinal cord carries message to brain

4.- Brain knows the bladder is full

5.- Brain sends message to bladder

6.- Urination occurs

UROLOGICAL SOCIETY OF AUSTRALIA AND NEW ZEALAND

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Overactive bladder syndrome (OAB), characterized by urgency, with or without urgency incontinence, usually with frequency and nocturia. It is highly prevalent, affects the life of millions of people worldwide.

Anticholinergics (**Ditropan, Detrusitol, Vesicare**, **Enablex, Betmiga**) are the pharmacological treatment of choice for overactive bladder. However, the effectiveness is limited and many patients discontinue treatment due to adverse events or failed to provide adequate relief.

Since 2000 the use of botulinum toxin injections have become a well-established and widely accepted therapy for refractory neurogenic and non-neurogenic overactive bladder

FRACS
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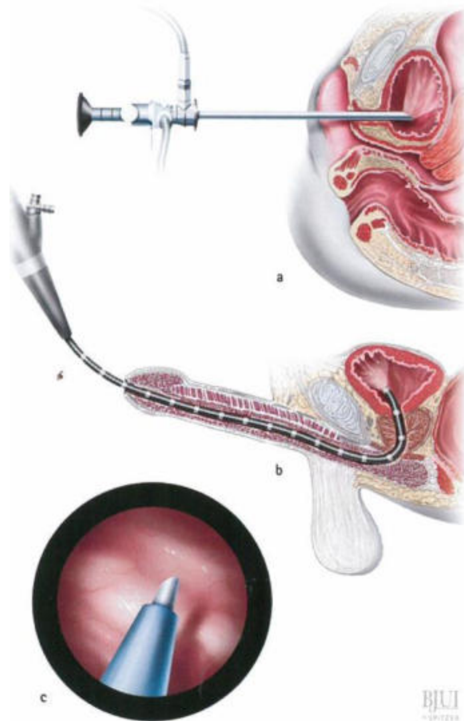
INDICATIONS

BOTOX is a prescription medicine that is injected into the bladder muscle and is used:

To treat overactive bladder symptoms such as a strong need to urinate with leakage or wetting accidents, urgency and frequency in adults when another type of medication (anticholinergic) does not work well enough or cannot be taken.

To treat leakage of urine (incontinence) in adults with overactive bladder due to neurological condition, who still have leakage or cannot tolerate the side effects after trying an anticholinergic medication.



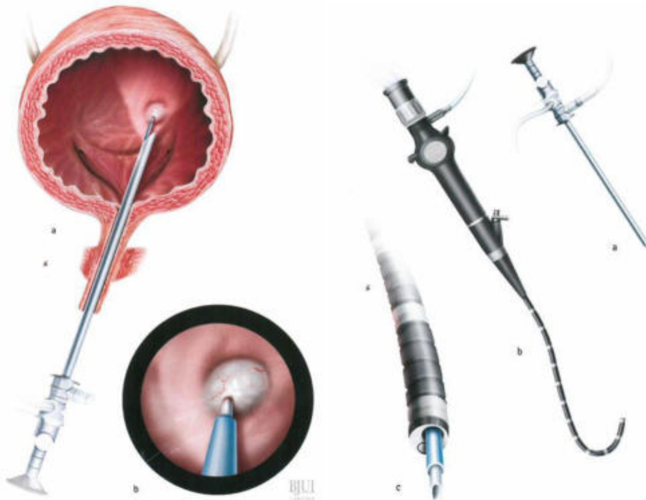
Botulinum injection into the detrusor.

Rigid and flexible cystoscope

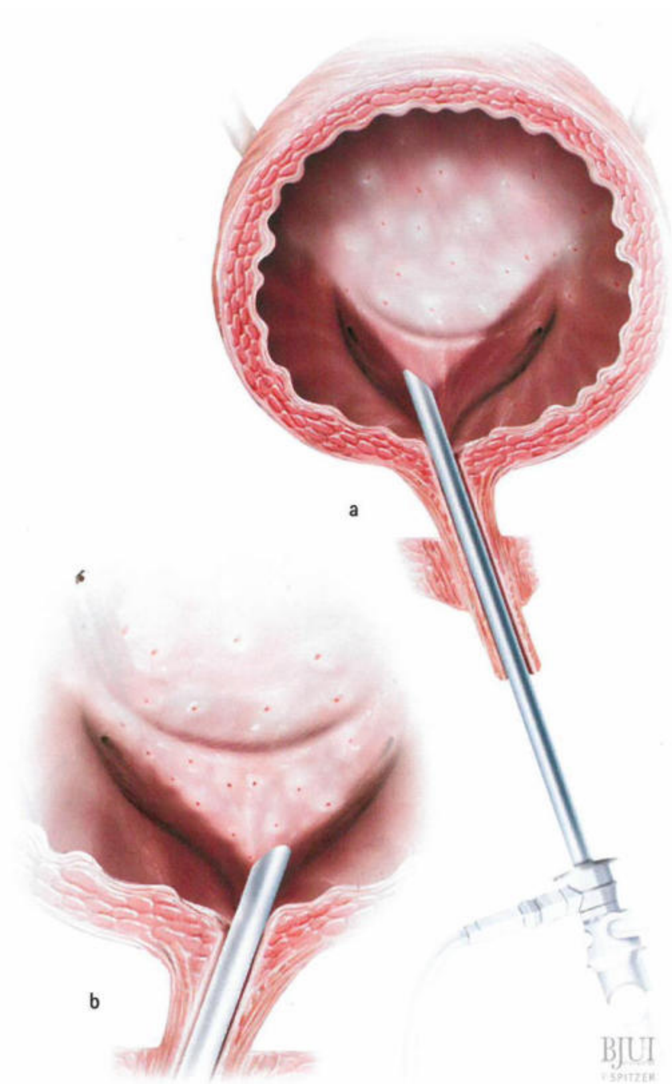
Botox is highly effective, minimally invasive, and generally well tolerated treatment that improves health-related quality of life, the use of botulinum toxin in the lower urinary tract remains restricted, being one of the **providers in Central Queensland.**

There are several serotypes of botulinum toxin. Toxin A is the most used and is available under several trade names. We use Botox (onabotulinumtoxin A) Ipsen Biopharm Ltd. Slough UK. For urological applications usually 100-200 U botox are used.

Despite the popularity of intradetrusor botulinum toxin injections, the exact mechanism of action remains to be elucidated. Nevertheless, it seems highly probable that, in addition to a direct afferent effect blocking the presynaptic release of acetylcholine from the parasympathetic innervation resulting in temporary chemo denervation of the detrusor, botulinum toxin also modulates afferent pathways.



The application technology and technique have undergone major developments in the past decade. Traditionally, botulinum toxin was injected into the detrusor at 20-30 sites, sparing the trigone. **Now can be done with a flexible cystoscopy under local anaesthesia in an outpatient setting.**



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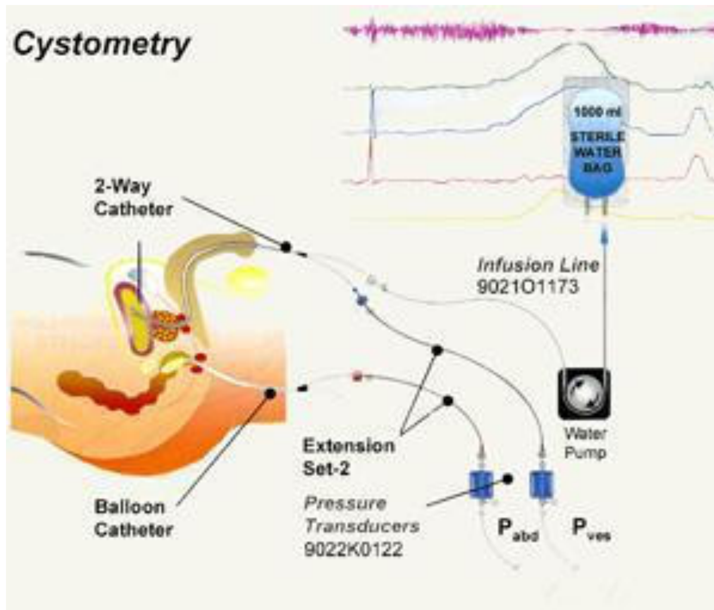
PLANNING AND PREPARATION

Before considering botulinum toxin injections into the detrusor. UTI and other obvious pathology needing different types of treatment must be excluded. Thus, we recommend complete urological evaluation including medical history, physical examination, bladder diary, urine analysis, urine culture, urinary tract ultrasonography, urethra-cystoscopy, bladder washings cytology, and urodynamic investigation.



PATIENT SELECTION

Patients with refractory overactive bladder, i.e. failure to respond to behavioural treatment (lifestyle modifications and bladder training) and pharmacotherapy with more than one antimuscarinic for at least 4 weeks, are candidates for botulinum toxin injections into the detrusor.

ADVERSE EFFECTS

-Among the adverse events of botulinum toxin injections, **increased postvoid residual urine volume** (PVR) with the potential need for catheterization is the most significant problem. Thus, all our patients are informed of the potential need for intermittent catheterization and a willingness to do so is prerequisite for this treatment. Patients with pre-existing voiding dysfunction and those at high risk for botulinum toxin induced high PVR (neurological patients, bladder outlet obstruction in pressure-flow study) are instructed to perform clean intermittent self-catheterisation (CISC) before treatment.

-Urinary tract infection

IN CASE OF PROBLEMS

NOTIFY THE UROLOGIST OR ATTEND TO THE EMERGENCY DEPARTMENT

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