

394

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TECHNIQUE FOR BOTULINUM TOXIN EXTERNAL URETHRAL SPHINCTER AND DETRUSOR INJECTION

Synopsis of video

Botulinum A toxin sphincteric injection is becoming an acceptable treatment for various voiding and storage dysfunction specially detrusor sphincter dyssynergia and detrusor overactivity. In this video, we are describing the technique to ensure correct sphincteric and detrusor injection.

Sphincteric injection:

Injection in male subjects is easy done as it is performed under direct vision using the 22ch cystoscope. Injection is done at 3 different sites. Due to the omega configuration of the sphincter injection, 2 of the injection sites have to be towards the roof of the urethra at the sphincteric area.

In females, due to the short urethra, direct visual control is difficult. For this reason we developed our own technique for precise localization of the needle. Bladder neck is delineated by a foley catheter balloon filled with radio-opaque dye placed in the bladder against bladder neck. Injection is made transperineally at 3, 9, and 12 o'clock under fluoroscopic control. The area of injection is midurethral.

Detrusor injection:

One hundred to three hundred units of the toxin is reconstituted in 24-30 ml of normal saline. The bladder is first mapped cystoscopically and 24-30 injections sites are chosen to cover the entire bladder excluding the trigone area.

A cystoscopic injection needle is advanced 0.5 cm into the bladder wall under direct vision. The bladder should be half full during injection to prevent injection in the perivesical area. Only 1 ml of the reconstituted toxin is injected in each site to prevent spread of the toxin. The needle should be left in place for few seconds after injection to prevent loss of the injected toxin.

The procedure is safe and easy to perform. We haven't encountered any complications related to absorption of the toxin. The procedure can be done as an outpatient procedure under local or regional anaesthesia.