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EFFICACY OF A NEW INJECTION REGIME FOR ONABOTULINUMTOXIN A IN IDIOPATHIC AND NEUROGENIC DETRUSOR OVERACTIVITY: ARE 10 LOCATIONS ENOUGH?

Hypothesis / aims of study

Botulinumtoxin A injection (BonT) represent the second line treatment in neurogenic (NDO) and idiopathic detrusor overactivity (IDO) non responsive to pharmacological treatment. Clinical as well as urodynamical data have shown the benefit of this treatment. However the injection technique as well as numbers of injections sites varies widely between 10-40 injection sites in- and excluding the trigonal area (1, 2). Based on these facts this study evaluated the efficacy of 10 injections sites with respect to videourodynamical effects.

Study design, materials and methods

This study is retrospective designed. In the time of january 2011 till december 2012, 87 patients with neurogenic detrusor overactivity and 56 patients with idiopathic detrusor overactivity, both populations non responsive to pharmacological treatment, were treated with onabotulinumtoxin A. All patients underwent a full urological examination with videourodynamic ahead of the procedure.
The standardized application amount for onabotulinumtoxin A was in conformity to the recommendation: for neurogenic detrusor overactivity 200 E onabutulinumtoxin A, for idiopathic detrusor overactivity 100 E onabutulinumtoxin A. The injection was performed in local anaesthesia after published regime in 7 injection sites into the bladder wall and 3 injection sites in the trigonal area (2).
For evaluating response, conventional urodynamic was performed 6 weeks after injection.
The differences in the urodynamical data were statistically analyzed.

Results

All injections could be performed in local anaesthesia. A conversion to another anaesthesiological regime was not necessary.
There were no adverse events observed which would result in hospitalization of the patient. No case was observed with induced reflux, despite of intratrigonal injection.
The efficacy of the injection with respect to the urodynamical data are shown in table 1:

	IDO (n= 56)	NDO (n= 87)
Max. cystometric capacity	+ 132 ml [± 95.5]	+ 243 ml [± 134.4]
Free of symptoms	43	75
Detrusor pressure at max. flow	- 18.8 cmH2O [± 9.2]	- 26.3 cm H2O [± 12.6]
Adverse events: Urinary retention Relapse Post void residual Vesicoureteral reflux after injection	 2 38 36 ml [± 54.8] 0	 43 84 426 ml [± 237.1] 0
Duration of treatment	4.7 months [± 1.4]	5.4 months [± 2.2]

Interpretation of results

BonT in neurogenic and idiopathic detrusor overactivity is a safe and recommendable therapy and has proven its efficacy. The technique is easy to perform in local anaesthesia. The effect of onabutulinumtoxin A is in conformity with published data adding aspects with respect to urodynamical effects. Showing its efficacy with only 10 location sites, it can be postulated that 10 location sites including the trigonal area are sufficient for the treatment of IDO and NDO.

Concluding message

Using 10 injection sites, onabotulinumtoxin A is still highly effective and safe to perform with no significant decrease in efficacy with respect to time and urodynamical changes, which are comparable to studies with more injection sites.

References

1. Rapp et al.; Int Braz J Urol, 33(2): 132-41; 2007
2. Alloussi et al.; World J Urol. 2012 Jun;30(3):367-73

Disclosures

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