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THE TREATMENT OF DETRUSOR HYPERREFLEXIA USING BOTULINUM A TOXIN IN MYELOMENINGOCELE PATIENTS UNRESPONSIVE TO ANTICHOLINERGIC THERAPY.

Aims of Study

To evaluate the efficacy of botulinum A toxin detrusor injections in myelomeningocele patients failing anticholinergic therapy.

Methods

Sixteen myelomeningocele patients (10 girls and 6 boys) with a mean age of 13 years **(8-20y)** were included in the study. All were on CIC and had severe detrusor hyperreflexia and incontinence despite high dose anticholinergic therapy **.** In all cases patients were evaluated by history, physical examination and urodynamic evaluation prior to treatment. Cystoscopically, botulinum A toxin (Botox) at a dose of 4 IU/kg was injected in 20 -30 different locations excluding the trigone. Anticholinergic medications were discontinued for at least 3 weeks following treatment and were then progressively resumed if incontinence persisted. The patients were reevaluated with history, physical examination and urodynamic evaluation 3 months following treatment.

Results

Total continence was restored in 11 patients (68%). The mean bladder capacity (BC) increased from 221cc (±134) to 307cc(±155) (p=0.02) and the maximum detrusor pressure at capacity decreased from 33.7cm H2O (±18) to 12.3 cm H2O (±17) (p=0.015). Continence markedly improved in 2 patients (12.5%) despite unchanged urodynamic parameters. Their mean BC was 246cc (±171.1) prior to treatment and 203cc (±209.3) following treatment (p=0.35) and the maximum detrusor pressure at capacity remained unchanged at 45cm H2O (±7.07) prior to treatment and 44.5 cm H2O (±14.8) following treatment (P=0.9). Incontinence persisted without improvement in 3 patients (18.75 %). Their mean BC was 302cc (±193) prior to treatment and 232cc (±113.8) following treatment (p=0.35) and the maximum detrusor pressure at capacity was 46.3cm H2O (± 5.5) prior to and 36.3 cm H2O (±27.1) following treatment (P=0.6). There were no complications.
Follow up at 1year of 12 patients showed that the effect of the treatment lasted between 6 to 9 months.

Conclusions

A toxin appears to be a safe alternative therapeutic option for myelomeningocele patients failing anticholinergic therapy. Our preliminary data is encouraging but long-term assessment in a larger sample of patients will be necessary to determine durability of the response, potential retreatment rates and reactions and the optimal timing for injection. Should our preliminary observations hold true this method may offer a viable alternative to more invasive treatment options in patients failing medical bladder management