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Case Report

A Rare Case of Chemical Peritonitis Following Intravesical Botulinum A Injection for Detrusor Overactivity

Case Report

A 72 year old lady attended for elective administration of intravesical Botulinum A toxin (Botox 200iu) injections, as a day-case procedure, for the treatment of detrusor over activity. The procedure was undertaken without any complications. A few hours after the operation the patient developed severe constant generalized abdominal pain and distension. There were no other associated features. She underwent a computerized tomography (CT) scan of her abdomen and pelvis which was normal, followed by a Cystogram which was also normal. The only abnormal finding was that of an elevated CRP (380 mg/L). She was treated empirically with intravenous Cefuroxime and Metronidazole for twenty-four hours. Her symptoms slowly resolved and she was discharged home on the 3rd post-operative day with oral antibiotics. She experienced no further complications. Although the exact cause of her symptoms was not found, the timing of this complication means it is highly probable to be due to the intravesical Botox injection. Given the above findings, the most likely diagnosis is that chemical peritonitis. This has not previously been reported in the literature as a side effect of intravesical Botox.

Botulinum A toxin (Botox) is a well-established second line treatment for detrusor overactivity, and is also used in many other fields of medicine and surgery. It is known to cause local complications, such as urinary retention or high post void residuals. Intravesical Botox has previously been reported to cause rare systemic side effects, such as jaundice, generalized muscle weakness and paralysis [1-3]. A literature review by De Laet in 2005 described two case reports where Botox administration to the Lower urethra track (LUT) resulted in systemic side effects. In one case three out of five patients who underwent LUT Botox injections developed upper limb weakness. A larger study reported that five out of sixty-one participants developed hypostenia following LUT Botox administration. Systemic complications have also been reported when it is used outside the LUT. A case series of 107 patients reported that dysphagia was the

most common side effect following injection of Botox for torticollis. They hypothesized that the mode of action was via local diffusion [3]. Although the mechanism of action causing these complications is unclear it is suggested that the toxin has spread past the target organ into systemic circulation. In the majority of cases systemic complication from Botox resolve spontaneously within 2 weeks to 2 months [3].

This is the first reported case in the literature of intravesical Botox causing chemical peritonitis. The disease Botulism can cause autonomic and gastrointestinal disorders, and is associated with paralytic ileus [4]. It is therefore possible to hypothesise that ileus could be an adverse event caused by the therapeutic administration of Botulinum toxin A. Rajagpal et al. [5], conducted a retrospective cohort study in 2012 to assess the effectiveness of intravesical Botox for the treatment of detrusor overactivity. They found that out of the 25 cases included in the cohort study, one patient developed a side effect of bloatedness in the first post-operative week [5], suggesting a possible systemic gastrointestinal complication.

Botox has been demonstrated as an effective treatment for detrusor overactivity. Although local complications are well reported, the rare nature of systemic complications makes it difficult to quantify. Clinicians should be aware of potential systemic side effects including the involvement of the gastrointestinal system.

References

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