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BACTERIURIA IN PATIENTS UNDERGOING INTRADETRUSOR ONABOTULINUMTOXINA INJECTIONS FOR REFRACTORY NEUROGENIC DETRUSOR OVERACTIVITY: DO WE NEED ANTIBIOTIC PROPHYLAXIS?

Hypothesis / aims of study
Intradetrusor onabotulinumtoxinA injections is a highly effective, minimally invasive and well-tolerated therapy for refractory neurogenic detrusor overactivity (NDO). Many of these patients rely on some type of catheterisation and present with chronic bacteriuria. In these patients, antibiotic prophylaxis has been widely recommended since bacteriuria might impair efficacy and cause urinary tract infection (UTI) but the evidence is very limited. Therefore, aim of this study was evaluate if an antibiotic prophylaxis is needed in patients with asymptomatic bacteriuria undergoing intradetrusor onabotulinumtoxinA injections.

Study design, materials and methods
Between 06/2012 and 12/2014, a consecutive series of 154 patients undergoing a total of 273 treatments with intradetrusor onabotulinumtoxinA injections for refractory NDO were prospectively evaluated. Before treatment, urine samples were collected by sterile catheterisation for urinalysis and culture. Patients with no clinical signs for UTI underwent intradetrusor onabotulinumtoxinA injections and no antibiotic prophylaxis was given. Efficacy and safety of intradetrusor onabutulinumtoxinA injections were assessed and compared between patients with and without bacteriuria prior treatment.

Results
Asymptomatic bacteriuria was found in 73% (200/273 treatments). Following treatment, UTI occurred in 5% (9/200) and 7% (5/73) of patients with and without bacteriuria, respectively. Intradetrusor onabotulinumtoxinA injections were clinically and urodynamically successful in 70% (192/273). Comparing patients with and without bacteriuria, there were no significant differences in clinical and urodynamic parameters (all $p>0.05$. The treatment effect lasted for a mean of 10 months and was similar ($p=0.56$) in both groups (with bacteriuria 12±15 months; without bacteriuria 10±12 months). In addition, no association between bacteriuria and treatment-related adverse events (odds ratio 0.64, 95% confidence interval (CI) 0.23-1.81, $p=0.4$), nor for therapy failure (odds ratio 0.78, 95% CI 0.43-1.43, $p=0.4$) was detected.

Interpretation of results
Asymptomatic bacteriuria in patients undergoing intradetrusor onabotulinumtoxinA injections for NDO did not affect safety and efficacy outcomes. Thus, antibiotic prophylaxis seems not to be justified and needs to be critically reconsidered, especially taking into account the alarming antibiotic resistance worldwide.

Concluding message
In patients undergoing intradetrusor onabotulinumtoxinA injections for NDO, asymptomatic bacteriuria did not affect safety and efficacy outcomes. Thus, antibiotic prophylaxis seems not to be justified and needs to be critically reconsidered.

Disclosures
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