

DOES ASYMPTOMATIC BACTERIURIA INCREASES THE RISK OF UROSEPSIS OR MODIFIES INTRA-DETRUSOR BOTULINUM TOXIN A (BoNTA) EFFICACY?

Hypothesis / aims of study

Intra detrusor BoNTA injection is an acceptable 2nd line treatment for neurogenic & non-neurogenic overactive bladder (1). The present recommendation suggest, for safety reasons, to postpone the procedure in case of urinary tract infection (UTI) (2). These recommendations are based on the Infectious Disease Society of America guidelines before urological intervention referring to any "traumatic genitourinary procedures associated with mucosal bleeding" (3). The lack of hard evidence regarding efficacy & safety of BoNTA injections in patients with asymptomatic bacteriuria questions the pertinence of this recommendation. Our study was intended to address this evidence gap.

Study design, materials and methods

Medical record of patients having received BoNTA between 2009 & 2013 was reviewed. Only patients with urodynamic study before & 3 month after their first BoNTA, and a urine culture (UC) taken at the time of injection were included in the efficacy analysis. Only patients with completed phone questionnaire 2 weeks after injection & UC at the time of injection were included in the safety analysis. Patients with frank pyuria or symptomatic UTI were not injected. Asymptomatic patients with positive dipstick were injected and then treated with empirical oral antibiotics until formal UC results were obtained. Efficacy was assessed by the change (%) in maximal cystometric capacity (MCC) after & before BoNTA. Safety was assessed by the presence of symptomatic UTI, hematuria or the need for hospitalization in the month following the injection

Results

Safety cohort consisted of 458 injections (171 OAB, 287 NDO). Symptomatic UTI's were statistically significant related to the presence of positive UC (UC+), both in uni and multi-variant analysis ($p \leq 0.001$). Odds ratio for (UC+) was 15.9. No case of severe complication was observed in patients with (UC+).

Efficacy cohort consisted of 92 patients (41 OAB, 51 NDO). (UC+) at the time of injection had no statistically significant effect on BoNTA efficacy in uni-variant analysis ($p=0.142$). In multi-variant analysis (UC+) along with etiology, gender, age, need for CIC and BoNTA dosage had no statistically significant effect on BoNTA injection efficacy

Interpretation of results

Although asymptomatic bacteriuria significantly increase the risk of symptomatic UTI, it does not increase the risk of urosepsis or the need for hospital admission. It does not adversely affects BoNTA injection efficacy, as assessed by MCC.

Concluding message

This study should lead to change the current injection recommendations

References

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Disclosures

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