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IMPACT OF ANXIETY TRAITS AND COPING STYLES ON TREATMENT OUTCOME IN DRUG-REFRACTORY, NON-NEUROGENIC OVERACTIVE BLADDER PATIENTS MANAGED BY INTRAVESICAL BOTULINUM TOXIN A (BTX)

Hypothesis / aims of study

Currently there is paucity of data on how anxiety traits correlate with overactive bladder (OAB) treatment outcome (1). Whilst patients who respond poorly to treatment of OAB may have generally higher anxiety levels (state anxiety) , there may also be underlying differences in their innate anxiety trait (trait anxiety) and coping styles in general. This study aims to investigate whether drug-refractory non-neurogenic OAB patients who have poorer responses to intravesical Botulinum toxin A (BTX) therapy have higher anxiety traits and poorer coping skills compared to those who responded well to BTX treatment.

Study design, materials and methods

Single centre retrospective cohort study of 25 patients (60% females and 40% males, age range 24 – 80 years) with drug refractory OAB who have undergone BTX injections were studied. All patients have failed at least one non-uroselective and one uroselective anticholinergic agent prior to BTX. All have received at least one BTX treatment. Two validated questionnaires – the 40-item State Trait Anxiety Inventory (STAI) (2) and the 29-item BriefCOPE Questionnaire (BCQ) (3) – were mailed and completed by patients at least 2 months after BTX treatment to assess anxiety and coping styles of responders versus poor responders to BTX.

Results

Females had higher mean scores for anxiety and all coping styles compared with males ($p < 0.05$). There was a trend to increasing mean anxiety scores (both state and trait anxiety), as clinical response to BTX decreased ($p = 0.30$). However, patients who had poor response to BTX had **significantly higher trait anxiety** scores compared to those who responded to BTX ($p<0.05$). Poor responders to BTX also had higher state anxiety scores compared to responders, but not as statistically significant ($p=0.19$) as with the trait anxiety scores. In terms of coping styles, emotion-focused coping produced the highest means for all BTX response scores. There was no significant difference in coping styles between those who responded to BTX and the non responders.

Interpretation of results

Females with drug-refractory OAB report higher anxiety levels than their male counterparts and may be better at identifying the coping styles they use to manage their condition. Whilst higher mean anxiety scores (both state and trait) were generally identified in patients who responded poorly to BTX, there exists a statistically significant difference in the underlying anxiety traits (trait anxiety) between those who responded well versus those who failed treatment. State anxiety is not as strongly associated as trait anxiety in predicting poor outcome with BTX. It is unclear from this study whether higher state anxiety causes poorer BTX responses or whether poorer responses cause higher state anxiety score at time of questionnaire completion. Coping styles may also alter with differing BTX responses.

Concluding message

Literature on looking at how personality trait can affect OAB symptomatology and treatment outcome is scarce. We have shown that females with drug-refractory OAB report generally higher anxiety levels than their male counterparts and may be better at identifying the coping styles they use to manage their condition. Patients with poor clinical responses to BTX have **higher trait anxiety scores** compared to those who report good responses ($p<0.05$). As for mean anxiety scores and state anxiety scores, the differences were not as statistically significant. We suggest that questionnaires assessing trait anxiety and coping skills may be useful tools whereby clinicians can recognise potential patients at an early point who may respond poorly to treatment of OAB. Whilst to our knowledge, this is the first study to demonstrate that anxiety traits may play a role in predicting treatment outcome in idiopathic OAB patients, further research is needed to validate our findings, as well as to elucidate other factors which may lead to failure of BTX or drug treatment in this patient population.

References

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Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**