

OVERACTIVE BLADDER AND INTERSTITIAL CYSTITIS: A COMMON AETIOLOGICAL PATHWAY?

Aims of Study

Although our understanding of both overactive bladder (OAB) and interstitial cystitis (IC) is incomplete, it is thought to involve damage to nervous system pathways and/or sensitisation of afferent nerves in the bladder. A number of aetiologies, including neurological causes, have been proposed. Increased nerve growth factor (NGF) expression has been found in the urothelium of patients with sensory urgency. In patients with interstitial cystitis (IC) a significant increase in nerve fibre density and NGF expression within the bladder wall suggests a specific association between nerve fibre proliferation and IC. Here we investigate whether the diagnoses OAB and IC actually reflect a common aetiology, with previous pelvic surgery or trauma accounting for nerve fibre proliferation/neoformation.

Methods

34 female patients diagnosed with IC and 29 female patients diagnosed with OAB, based on urodynamic findings and established criteria, were reviewed retrospectively. Study inclusion criteria were: age >18, no symptoms of urgency, frequency, dysuria for at least 6 months, no previous or current TCC, no genitourinary-TB, no ovarian, vaginal or cervical cancer, no current vaginitis or yeast infection, no bacterial cystitis or herpes for the previous 3 months, no radiation cystitis, neurogenic bladder dysfunction or bladder outlet obstruction, no history of urethral dilatation, cystoscopy or cystogram in the previous 3 months and no history of cystoplasty or neurectomy.

Results

We found that the majority (OAB =72% / IC = 70%) of these patients, had a past medical history of pelvic (obstetric) surgery prior to their urinary symptoms. In those patients who did not report any previous pelvic surgery the possibility of caesarian section or a traumatic delivery could not be fully excluded. Of those patients with a history of previous pelvic surgery the majority had undergone the procedure of hysterectomy. The remaining patients had had either an anterior repair, laparotomy and ovarian cystectomy, a rectocele repair or a dilatation and curettage.

Conclusions

To date OAB and IC have been regarded as two separate clinical entities. Our findings suggest a possible common aetiology, with previous pelvic surgery/trauma, leading to re-innervation with aberrant nerve fibre proliferation/neoformation after the primary denervating injury. These findings could enhance our understanding and provide a new definition and therapeutic approach, targeting the cause and not only the symptoms. Among the possible treatments, transcutaneous nerve stimulation (TENS) or neuromodulation may be considered in those patients with a history of previous pelvic trauma as initial or second-line therapy. This may reduce the number of non-responders to unspecific empirical treatment.