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Tan Y K[1], Toh K L[1]
1. *Tan Tock Seng Hospital*

TOLTERODINE IMPROVES THE COMPLIANCE AND CYSTOMETRIC CAPACITY OF ADULT NEUROGENIC BLADDERS SECONDARY TO SPINAL CORD INJURY

Hypothesis / aims of study

Spinal Cord injury patients often develop complications secondary to upper urinary tract deterioration. There have not been any significant studies reviewing the efficacy of tolterodine in the management of patients with adult neurogenic bladders secondary to spinal cord injury. We decided to review our urodynamic data of adult patients with neurogenic bladders secondary to spinal cord injuries who were treated with tolterodine and oxybutynin.

Study design, materials and methods

From our urodynamic database, 136 patients were found to have neuropathic bladders secondary to spinal cord injury. We specifically reviewed pre and post tolterodine urodynamic studies of these patients and compared them with a similar group of patients which were treated with oxybutynin.

Results

Complete data sets of urodynamics, before and while on medication, were available for 18 and 10 patients treated with tolterodine and oxybutynin respectively. Mean age was 44 yrs old, mean followup period was 3 years and male to female ratio was 14:1. The levels of spinal cord injuries were as follows: 16 cervical cord, 9 thoracic cord and 3 lumber spine injuries. For the tolterodine group median change in compliance was +13ml/cmH20, p = 0.01 and median change of cystometric capacity was +88mls, p = 0.115. For the oxybutynin group, median change in compliance was +4.0 ml/cmH2O, p = 0.285 and median change in cystometric capacity was -5mls, p = 0.26

Interpretation of results

Although tolterodine is widely used in the management of neurogenic bladder secondary to spinal cord injuries, there is a paucity of evidence supporting it's use especially in delaying worsening compliance and subsequent upper tract complications. Our study indicates that tolterodine seems to improve compliance and cystometric capacity of patients with adult neurogenic bladder secondary to spinal cord injuries.

Concluding message

This preliminary data suggests that tolterodine does not only reduce the frequency of urge but also has benefits to patients, with neurogenic bladders secondary to spinal cord injuries, by improving compliance and thus possibly reducing the incidence of upper tract deterioration.

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