

## Measuring the effect of antimuscarinics in the bladder

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Dear Editor,

We thank Professor Wiwanitkit for his letter [1] regarding our recent publication [2]. In answer to his queries, we feel that the visual analogue scale (VAS) for urgency is a subjective measure of sensory function as felt by the patient. The motor function was determined using the ultrasound measurement of bladder wall thickness (BWT), on the basis that if there was increased motor activity of the detrusor muscle, as in detrusor overactivity, this would be reflected in hypertrophy, which we proposed would be reversed if antimuscarinics had an effect on motor function.

The VAS for urgency was used to determine the changes in the cardinal symptom of urgency associated with detrusor overactivity. We acknowledge we cannot prove the direct relationship to bladder sensory processes. In this study we are attempting to determine whether the sensation of urgency and its improvement, as reported by the patient, corresponds to any changes in motor function as measured by BWT. The observation of continued lessening of sensation of urgency after the BWT had stopped declining led to the conclusion that the amelioration of urgency is not wholly explained by the reversing of the hypertrophy seen

in detrusor overactivity. It is on this basis that we concluded that the mechanism by which antimuscarinics improve patients' symptoms is more complex than simply inhibiting detrusor contractions and may involve a sensory effect. We do acknowledge that we have not provided evidence of this interrelationship other than these observations.

The PPBC score was used to provide additional information as to improvement of overall bladder condition rather than being directly related to changes in motor or sensory processes. We believe it is important to use subjective measures of improvement when analyzing the effect of any treatment as these subjective measures form the basis of assessing the impact of a condition as well as the effect.

### References

1. Wiwanitkit V (2010) Scoring for determining effect of antimuscarinics. *Int Urogynecol J*. doi:10.1007/s00192-010-1207-0
2. Panayi DC, Tekkis P, Fernando R, Khullar V (2010) Is the beneficial effect of antimuscarinics related to motor or sensory changes in the bladder? *Int Urogynecol J* 21:841–845. doi:10.1007/s00192-010-1123-3

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