

## Peer Review File

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### Review Comments

#### Reviewer A

Excellent and understandable description of bladder function and its deriving pathologies.

Important pathophysiological findings for interdisciplinary teams of urologists, gynaecologists and coloproctologists.

Reply: Thank you for your comments.

#### Reviewer B

The paper titled "Peripheral muscle force balance/imbalance in neurological binary control of bladder function and dysfunction." presents a review on bladder function and dysfunction. Based on the Integral Theory, each pathophysiology of urinary dysfunction is described in detail, appropriately referenced to diagrams, and provides useful information to the reader.

I have one comment regarding the content.

I think a more multifaceted discussion would be better served by mentioning the smooth muscle around the urethra in the paragraph on page 11 that discusses muscles and ligaments. Please cite the following reference and discuss smooth muscle as one of the structural components.

Kato, M. K., Muro, S., Kato, T., Miyasaka, N., & Akita, K. (2020). Spatial distribution of smooth muscle tissue in the female pelvic floor and surrounding the urethra and vagina. *Anatomical Science International*, 95, 516-522

Reply: Thank you. We have added to the text: We see organ smooth muscle working reflexly (and appropriately) in co-ordination with the binary control system during both closure and urination (31,32). For urination, the posterior vagina, and posterior urethral wall act like a trapdoor opened out prior to micturition by the LP/LMA (*Figure 1*). For continence during effort, the PCM (*Figure 1*) pulls the contracted distal vaginal wall forwards like a trapdoor to close the distal urethra from behind.