Reviewer's report

Title: Abdominal Wall Activity Is Necessary for Normal Female Rat Voiding

Version: 1 Date: 26 September 2006

Reviewer: Karl-Erik Andersson

Reviewer's report:

General
The authors have recorded abdominal wall EMG activity in urethane-anesthetized rats during free voiding (after hydration) before and after BTX paralysis of the abdominal wall, and in rats undergoing continuous cystometry using a transurethral catheter. The methods are adequately described and the results reveal some interesting observations. There are some issues that should be considered and handled by the authors.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The authors state in the title and elsewhere in the manuscript that abdominal wall activity is “necessary” for “normal” female rat voiding. It may be questioned whether or not the activity is necessary – voiding occurred also after BTX paralysis of the abdominal muscles. It may also be questioned if the authors investigated “the occurrence and necessity of this voiding associated activity in normal voiding”. Any type of anesthesia will affect voiding. Even if urethane affects micturition reflexes less than other anesthetics, anesthetized animals do not have normal voiding. The authors sometimes refer to “normal voiding in the urethane-anesthetized rat”. This may be correct, but that type of normality cannot be directly translated to normal voiding in a conscious, intact animal.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

P9, lines 179-182. In the three animals where intra-abdominal pressure was measured during voiding, a rise of 1.7 cm H2O was registered. Considering that maximal voiding pressure in female rats often exceeds 50 cmH2O, it may be questioned whether this abdominal pressure increase actually contributes to voiding in a significant way.

P12, lines 250-231. “The observed responses in this study of urethane anesthetized rats should be fundamentally the same as in non-anesthetized rats.” This may be correct, but has to be proven in conscious animals.

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Discretionary Revisions (which the author can choose to ignore)

P13, line 113. “initial 2 ml bolus..” Of what? Saline?

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests