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LETTER TO THE EDITOR

Self-report versus sensory-motor examination of anus in spinal-cord-injured patients

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Harvey *et al.*[1] showed that spinal-cord-injured patients 1 year after injury are reasonably accurate at self-reporting S4–5 sensory and motor function. This study is important and will impact clinical practice as physicians may begin to use self-reporting rather than physical examination of the rectum to determine S4–5 sensory and motor function. However, we have some concerns regarding this study:

First, the proposed questionnaire has some defects. The four questions do not differentiate right from left side.[2] Additionally, the presence of partial sensation is not discriminated from completely intact sensation in that the presence of any sense is considered positive. Similarly, the questionnaire cannot differentiate superficial and deep sensation. There is only one question about S4–5 motor evaluation, which cannot differentiate spasmodic muscular tightening due to say constipation from normal muscular control in the absence of diarrhea.[3]

Second, more than two-thirds of the patients eligible for inclusion in the study (82 out of 116) did not participate increasing the likelihood that the study is subject to selection bias.

Third, comparing self-reported neurological function with the gold standard of physical examination, the authors reported high false-positive rates. This is explained as possibly being related to greater accuracy in self-reported neurological status in comparison with physical examination. However, in our culture, when one asks questions to patients, affirmative responses are much more common than negative responses. Therefore, we prefer to ask negatively worded questions to prevent receiving reflexive 'yes' answers, although we believe that neutral questions are better yet. In other words, questions should not be guiding. In the study of Harvey *et al.*, all four questions of the questionnaire have positive wording.

Finally, in addition to the likelihood ratio that has been mentioned by Harvey *et al.*, we would add the following results to the study: sensitivity, specificity, positive and negative predictive values, and accuracy for sensory questions were: 95.8%, 50.0%, 82.1%, 83.3%, and 83.3%, respectively. Sensitivity, specificity, positive and negative predictive values, and accuracy for S4–5 motor evaluation were 75.0%, 69.2%, 42.9%, 90.0%, 70.6%, respectively. Thus, the diagnostic accuracy of sensory self-reporting is 83.3% and motor self-reporting was just 70.6%.

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1 Harvey LA, Weber G, Heriseanu R, Bowden JL. The diagnostic accuracy of self-report for determining S4-5 sensory and motor function in people with spinal cord injury. *Spinal Cord* 2012; **50**: 119–122.
2 Rahimi-Movaghar V. Sensory anal examination in spinal cord injury. *Spinal Cord* 2009; **47**: 901.
3 Rahimi-Movaghar V. Clinical trials for the treatment of spinal cord injury: cervical and lumbar enlargements versus thoracic area. *Brain* 2009; **132** (Pt 7): e115; author reply e116.