Instructions for the Clinical Scale for Contraversive Pushing (SCP)

To the Editor:

We would like to thank Drs Baccini, Paci, and Rinaldi (*Neurorehabil Neural Repair* 2006;20: 468-472) for their thorough analysis of reliability and validity of our Clinical Scale for Contraversive Pushing (SCP).[1] This scale may help diagnose and quantify the behavior of patients with stroke and left or right brain damage who demonstrate the "pusher syndrome"—a behaviour in which patients actively push away from the nonhemiparetic side, leading to a loss of postural balance.

Without empirical knowledge about appropriate cutoff scores for the SCP, we tentatively suggested a criterion[1] that was based only on our daily clinical experience and conservative enough to avoid false-positive diagnoses as long as no empirical data on reliable cutoff scores were available. We are delighted that Baccini and coworkers have filled this gap. The authors selected 26 patients who had a hemiparesis and postural asymmetry. Their observed cutoff criterion (all 3 SCP variables >0) in this selected patients group now requires further investigation to avoid false-positive diagnoses in an *unselected* group of stroke patients (ie, those who typically present to a department of general neurology).

The SCP investigates 3 variables: (1) spontaneous body posture, (2) the use of the nonparetic extremities to bring about the pathological lateral tilt of the body axis, and (3) resistance to passive correction of tilted posture. Baccini and colleagues rightly mention that in our original description of the scale, no details were provided about how to test subjects' use of the nonparetic extremities to bring about the pathological lateral tilt (SCP variable B) before grading them. They speculated that more detailed instructions, with the explicit definition of the tasks to be used to explore changes of position, could enhance the scale's validity as a diagnostic tool for pusher syndrome. We agree and would like to complement instruction and task definitions for SCP variable B as follows: abduction and extension of the nonparetic extremities should be assessed in 2 steps. With the patient sitting on the bedside, the examiner first observes whether the ipsilesional extremities are spontaneously abducted from the body, searching for contact with the surface (arm/hand on mattress; leg/foot on floor), and show activity to achieve extension of the elbow and/or the knee and hip joints. If so, variable B is given the value 1 for sitting. If abduction and extension of the nonparetic extremities are not spontaneously performed, the examiner asks the patient to (1) glide the buttocks on the mattress toward the nonparetic side and/or (2) change sitting position from bed to wheelchair toward the nonparetic side. In the latter case, the buttocks are lifted just enough to pass over the tires of the wheelchair. The patient then has to master a small swinging movement of the buttocks to change seats. The examiner observes whether, in at least 1 of these 2 situations of position

change ((1) or (2) above), the ipsilesional extremities are abducted from the body and show activity to achieve extension of the elbow and/or the knee and hip joints. If so, variable B is given the value 0.5 for sitting. The examination continues with the patient standing. The examiner first observes whether the ipsilesional leg is spontaneously (already when rising from the sitting position) abducted and extended. If so, variable B is given the value 1 for standing. If abduction and extension of the nonparetic leg are not spontaneously performed, the examiner asks the patient to start walking.
The examiner observes whether the patient now abducts and extends the ipsilesional leg. If so, variable B is given the value 0.5 for standing.

Sincerely,
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REFERENCE

1. Karnath H-O, Ferber S, Dichgans J. The origin of contraversive pushing: evidence for a second graviceptive system in humans. *Neurology*. 2000;55:1298-1304.