**DBS for Dystonia: should we take our patients to the swimming pool?**

S.A.J.E.A. Lagerweij1,2, M.A.J. Tijssen1,2, M. van Beveren3, T. van Wieren4, M.E. van Egmond1,2

1 Department of Neurology, University Medical Center Groningen (UMCG), University of Groningen, Hanzeplein 1, 9700RB Groningen, the Netherlands

2 Expertise center Movement Disorders Groningen, Hanzeplein 1 9700RB Groningen, the Netherlands

3 ZINN Zorgorganisatie, de Burcht, van der Duyn Maasdamweg 250, 9602 VT, Hoogezand, the Netherlands

4 Eurocept Homecare, Loodsboot 7, 3991 CJ, Houten, the Netherlands

*Abstract*

**Background:** Deep brain stimulation (DBS) is an effective treatment option for patients with medication-refractory dystonia. As swimming problems were recently reported in patients with DBS for Parkinson’s disease, we questioned our patients with DBS for dystonia, including 9 young-onset dystonia patients, and encountered 3 patients with severe swimming problems that have arisen after DBS implantation. The aim of this report is to increase the awareness of the potential risk of drowning in these patients and to start a narrative on possible interventions.

**Cases:** Three cases are described, case 1 had cervical dystonia and Meige syndrome, who experienced a near-drowning experience after DBS implantation. Case 2 had clinical amelioration of generalized dystonia with DBS, yet a loss of his ability to stay afloat while swimming. Case 3 is a woman with Meige syndrome who was an avid swimmer, but had to change her swimming styles and cannot keep up with others anymore after DBS implantation.

**Conclusions:** We highlight the occurrence of serious swimming problems in patients receiving DBS for dystonia. In our cohort, including n=9 young-onset dystonia, we detected it in 3 patients. From this report and previous studies, it seems clear that we need to make sure that patients have not lost their ability to swim after DBS-implantation.