Premonitory urge and tic severity, comorbidities, and quality of life in chronic tic disorders

Natalia Szejko1, Valerie Brandt2, Jana Essing1, Ewgeni Jakubovski1, Kirsten Müller-Vahl1

1 Department of Clinical Neurosciences, University of Calgary, Alberta, Canada
2 Department of Bioethics, Medical University of Warsaw, Poland
3 School of Psychology, Centre for Innovation in Mental health, University of Southampton, Southampton, UK
4 Clinic of Psychiatry, Social Psychiatry and Psychotherapy, Hannover Medical School, Hanover, Germany

Background

Tics have been found to be intimately associated with premonitory urges (PU) but knowledge about urges is still limited, with small sample sizes often limiting the generalizability of findings.

Research questions

1) Is tic severity associated with urge severity?
2) How common is relief after tic execution?
3) Which comorbidities are associated with urges?
4) Are urges, tics, and comorbidities associated with lower quality of life?
5) Can complex and simple, motor and vocal tics be differentiated based on PU?

Methods

N = 291 patients with a confirmed diagnosis of chronic primary tic disorder (age=18-65, 24% female) filled out an online survey assessing demographic data, comorbid conditions, location, quality, and intensity of PU, as well as quality of life.

Results

1) PU and tic severity were significantly associated.
2) PU was usually described as sensation of tension or pressure and building up energy (Figure 1A).
3) Motor and vocal, complex and simple tics did not differ regarding PU intensity, frequency, and quality, or relief (Figure 1B and 1D).
4) Urge intensity was comparable between different types of PU (Figure 1C).
5) 85% of urge-related tics were followed by relief.
6) A diagnosis of attention deficit/hyperactivity disorder (ADHD) or depression, female gender, and older age increased the likelihood of experiencing PU (Table 1).
7) More obsessive-compulsive symptoms (OCS) and younger age were associated with higher urge intensities (Table 1).
8) Different comorbidities were related to experiencing more intense urges of different qualities (Figure 2).
9) PU, complex vocal tics, ADHD, OCS, anxiety, and depression were related to lower quality of life (Table 2).

Conclusions

1. PU and tic severity are significantly associated.
2. Majority of patients with tics experience feeling of relief after tic execution.
3. Co-existing ADHD and depression increase the risk of PU.
4. Different types of tics did not differ regarding PU intensity, frequency, and quality, or relief.