Dramatic improvement of tardive dyskinesia movements by inline skating

A 25-year-old woman with severe tardive dyskinesia (TD) due to neuroleptics had substantial improvement of movements while inline skating (video at Neurology.org). She received pallidal deep brain stimulation (DBS), and gait and inline skating were assessed before and after DBS; her twin sister served as a control (figures 1 and 2). Possible explanations for her improvement include (1) balance stability required by inline skating provides external cues that are less prominent during gait; and (2) dystonia consistently responds to geste antagoniste. Since TD has variable response to treatments, we propose research into alleviating factors in TD that may advance treatment and rehabilitation in this incapacitating disorder.

Sara Carvalho Barbosa Casagrande, MD, Rubens Gisbert Cury, MD, PhD, Andrea Cristina de Lima-Pardini, PhD, Daniel Boari Coelho, Carolina de Oliveira Souza, PhD, Maria Gabriela dos Santos Ghilardi, MD, Laura Silveira-Moriyama, MD, PhD, Luis Augusto Teixeira, PhD, Egberto Rei Barbosa, MD, PhD, Erich Talamoni Fonoff, MD, PhD


Figure 2  Spine acceleration curves of the patient and her twin sister during gait and inline skating

Individual trials show representative spine acceleration profiles in the performance of gait (left panels) and inline skating (right panels), comparing the signals from the patient before and after deep brain stimulation (DBS) in reference to her healthy twin sister. AP = anteroposterior (A, B); ML = mediolateral (C, D); SI = superoinferior (E, F).

manuscript. L.A.T.: critical revision, analysis and interpretation of data. E.R.B.: critical revision of the manuscript for important intellectual content, study supervision. E.T.F.: study concept, critical revision of the manuscript for important intellectual content, study supervision.

Study funding: No targeted funding reported.
Disclosure: The authors report no disclosures relevant to the manuscript. Go to Neurology.org for full disclosures.

Correspondence to Dr. Casagrande: drausarcasagrande@gmail.com

Dramatic improvement of tardive dyskinesia movements by inline skating

*Neurology* 2017;89;211-213
DOI 10.1212/WNL.0000000000004092

This information is current as of July 10, 2017

<table>
<thead>
<tr>
<th>Updated Information &amp; Services</th>
<th>including high resolution figures, can be found at: <a href="http://n.neurology.org/content/89/2/211.full">http://n.neurology.org/content/89/2/211.full</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplementary Material</td>
<td>Supplementary material can be found at: <a href="http://n.neurology.org/content/suppl/2017/07/10/WNL.0000000000004092.DC1">http://n.neurology.org/content/suppl/2017/07/10/WNL.0000000000004092.DC1</a></td>
</tr>
<tr>
<td>References</td>
<td>This article cites 2 articles, 0 of which you can access for free at: <a href="http://n.neurology.org/content/89/2/211.full#ref-list-1">http://n.neurology.org/content/89/2/211.full#ref-list-1</a></td>
</tr>
<tr>
<td>Subspecialty Collections</td>
<td>This article, along with others on similar topics, appears in the following collection(s): Gait disorders/ataxia <a href="http://n.neurology.org/cgi/collection/gait_disorders_ataxia">http://n.neurology.org/cgi/collection/gait_disorders_ataxia</a> Motor Control <a href="http://n.neurology.org/cgi/collection/motor_control">http://n.neurology.org/cgi/collection/motor_control</a> Surgery/Stimulation <a href="http://n.neurology.org/cgi/collection/surgery-stimulation">http://n.neurology.org/cgi/collection/surgery-stimulation</a></td>
</tr>
<tr>
<td>Permissions &amp; Licensing</td>
<td>Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: <a href="http://www.neurology.org/about/about_the_journal#permissions">http://www.neurology.org/about/about_the_journal#permissions</a></td>
</tr>
<tr>
<td>Reprints</td>
<td>Information about ordering reprints can be found online: <a href="http://n.neurology.org/subscribers/advertise">http://n.neurology.org/subscribers/advertise</a></td>
</tr>
</tbody>
</table>