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STN DBS in Parkinson's disease camptocormia

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Introduction: DBS effects on camptocormia are still poorly clarified, a consense on the best target (GPi vs STN) is still lacking [1-2]. We describe a case of severe camptocormia in an advanced PD, treated with STN DBS.

Case report: A 73 yo male patient with a 15-years history of PD, developed motor fluctuations after 10 years of disease, and eventually severe camptocormia and Pisa syndrome appeared. His mobility and independance were heavily compromised by extreme anterior bending of spine (video segment 1), which resolved only when supine, while did not respond to suspension of pramipexole and only minimally to levodopa increase up to 2000 mg a day. Dorso-lumbar MR did not reveal myopathy. Cognition was notably intact, there were no comorbidities.
After discussing pros and cons with the patient and his caregiver, bilateral STN electrodes were implanted on December 6th, 2022. Stimulation was switched on after réglage on January 9th, 2023. A moderate reduction of camptocormia was achieved after 30 days of stimulation (video segment 2), along with good control of motor fluctuations.

Discussion: Lacking scientific and clinical data for clearcut inclusion criteria for DBS procedures in PD patients with postural deformities, including target choice, we think that each contribute, even a single case report may add on general knowledge on this topic.
Our case shows that STN DBS may improve parkinsonian truncal deformities, providing these symptoms have a recent onset and are not due to myopathy, as stated in literature.
Moreover advanced age is not an absolute contraindication for STN DBS in subjects with severe camptocormia not responding to other therapeutic options, providing other comorbidities are absent, and strong motivation along with comprehension of risk/benefit ratio are respected [3]. A longer follow up is needed to confirm the long term effect of STN DBS in our patient.

References:

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[2] Lizarraga et al., 2019. Mov Dis Clin Pract; 6 (8): 627-638.
[3] Margraf et al., 2016. J Park Dis; 6 (3): 485-501.