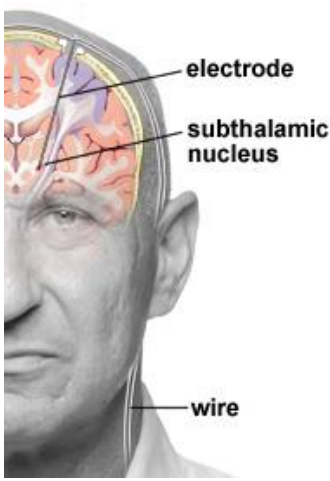


DEEP BRAIN STIMULATION AND SEXUAL FUNCTION IN PARKINSON’S DISEASE

T. Pedro¹, M. Sousa², M. Rito³, R. Pereira³, C. Januário^{1,2}, F. Moreira²

¹Faculty of Medicine of the University of Coimbra; ²Coimbra Hospital and University Centre, Neurology Department; ³Coimbra Hospital and University Centre, Neurosurgery Department

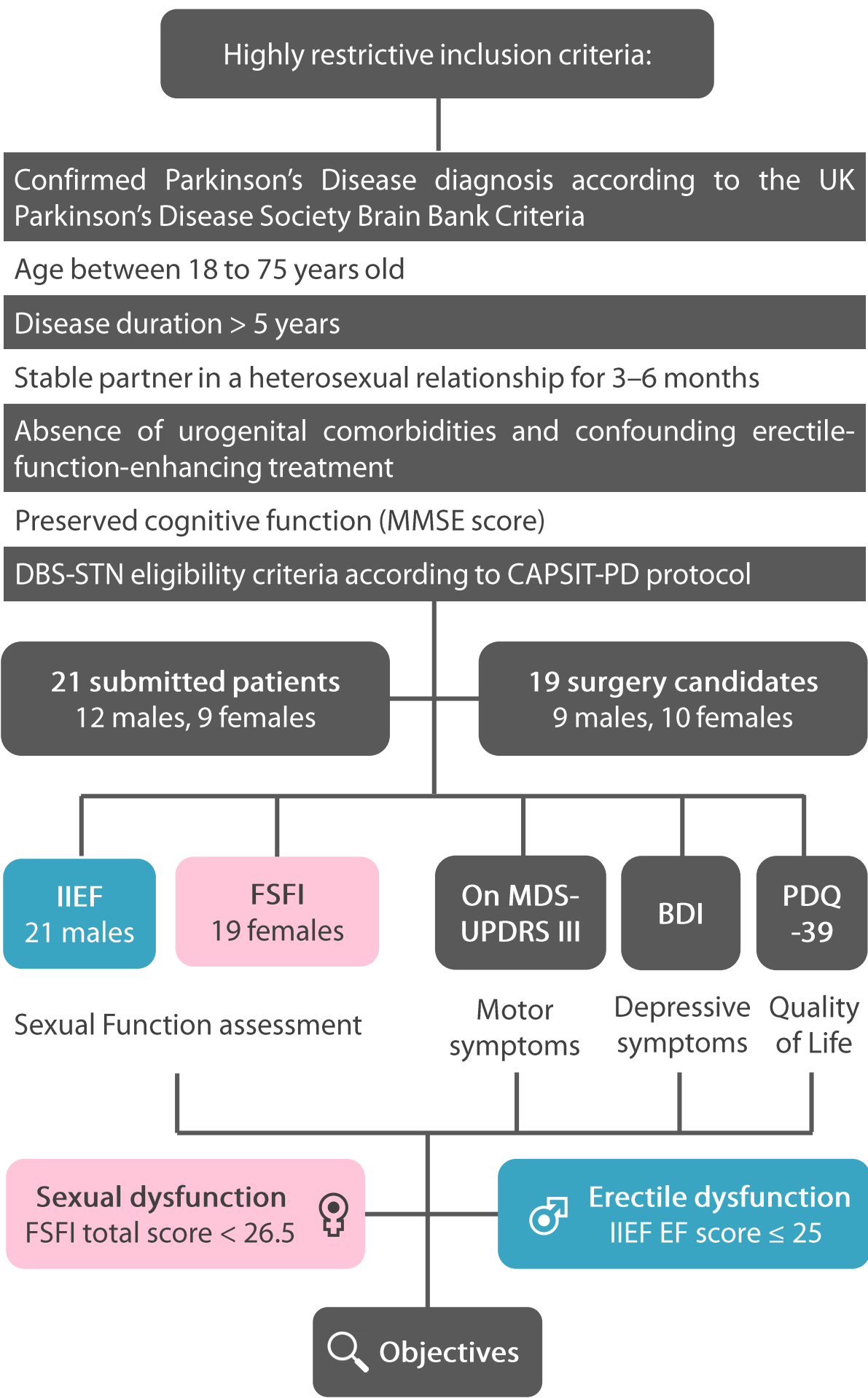
1 Background



DBS mechanism overview, Mayfield Clinic

Deep Brain Stimulation of the subthalamic nucleus (DBS-STN) is a **non-lesioning** surgical technique useful in the treatment of motor fluctuations and tremor in advanced Parkinson’s Disease (PD). Its influence on sexual function has been poorly studied, but it’s a **common concern** for patients and **seldom discussed** with the physician. Factors influencing erectile and sexual dysfunction in PD include age, motor and depressive symptoms, antiparkinsonian drugs, chronic comorbidities, etc.

2 Methods and materials

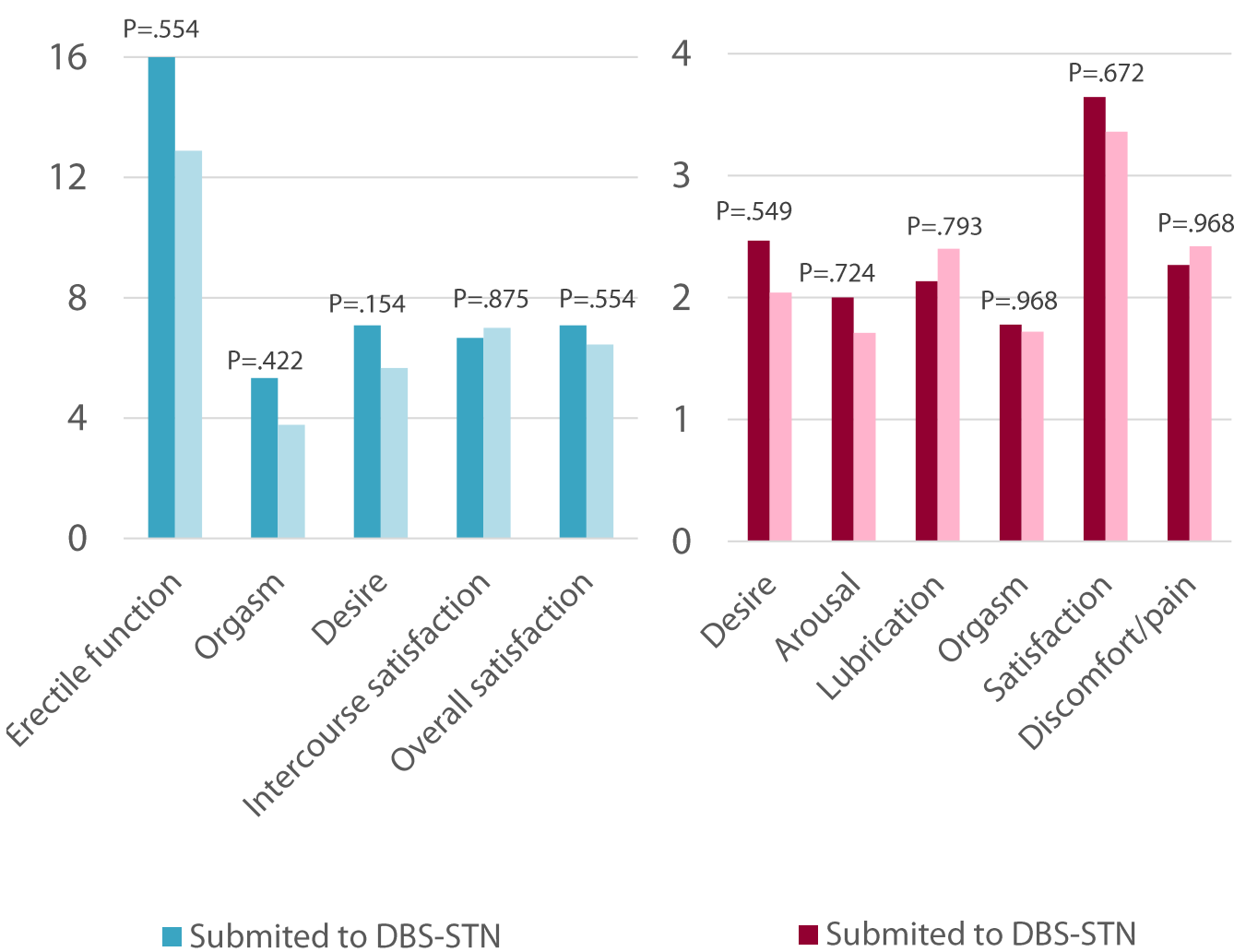


- Determine the impact of DBS-STN on PD patients’ sexual function
- Establish predictive factors for sexual function decline after surgery

3 Results and discussion

	Submitted to DBS-STN (n=21)	Candidates (n=19)	P-value
Age (years), mean±SD	62.9±8.6	60.7±7.9	.333
Gender, M/F (%M)	12/9 (57.1)	9/10 (47.4)	.752
Duration of disease (years)*	17.9±7.3	10.4±3.2	<.001
H&Y stage, mean±SD	1.9±0.5	2.1±0.3	.322
On MDS-UPDRS-III score*	20.3±9.0	26.9±10.1	.042
Erectile dysfunction, % (n)	83,3 (10)	77,8 (7)	1.000
IIEF total score*	42,2±19,3	35,8±20,4	.554
Sexual dysfunction, % (n)	77,8 (7)	90,0 (9)	.582
FSFI total score*	14,3±10,5	13,8±9,4	.968

Clinical variables and outcomes of treated patients with DBS-STN versus candidates | *values are mean±standard deviation.



FSFI and IIEF dimensions scores between DBS-STN submitted patients and candidates (Higher is better)

	Erectile dysfunction		P-value	Sexual dysfunction		P-value
	Present 81,0% (17)	Absent 19,0% (4)		Present 84,2% (16)	Absent 15,8% (3)	
Age*	62,9±6,4	49,8±8,9	.009	64,6±6,1	52,0±7,8	.005
Relative risk (95% CI)	1,259 (1,029-1,540)		.025	1,304 (1,013-1,679)		.039
Cardiovascular disease, % (n)	70,6 (12)	50,0 (2)	.338	87,5 (14)	0,0 (0)	.010
PDQ-39 emotional well-being score*	33,9±4,2	42,7±4,0	.043	51,2±20,2	13,9±13,4	.017

PD patients with and without sexual/erectile dysfunction univariate analysis | *values are mean±standard deviation; CI, confidence interval.

Patients submitted to DBS-STN had **similar prevalence of sexual (77,8%) and erectile (83,3%) dysfunction and scores** comparing with non-surgically treated candidates. Regardless of DBS-STN submission, PD patients with erectile (p=.009) and sexual (p=.005) dysfunction were significantly older. Females with sexual dysfunction had higher prevalence (87,5%) of cardiovascular diseases (p=.010). Lower emotional well-being was found in females with sexual dysfunction (p=.017), in contrast to higher emotional well-being in males with erectile dysfunction (p=.043).

4 Conclusions



DBS-STN DOES NOT SEEM TO ALTER THE SEXUAL FUNCTION OF PD PATIENTS

1.3

FOR EACH YEAR OF AGE, PD PATIENTS ARE 1.3 TIMES MORE LIKELY TO DEVELOP ED/SD



HEART DISEASES ARE ASSOCIATED WITH SD IN WOMEN WITH PD



INCREASED EMOTIONAL WELL-BEING MAY LEAD MEN TO REPORT ED MORE FREQUENTLY

5 References and abbreviations

Castelli L, Perozzo P, Genesia ML, et al. *Sexual well being in parkinsonian patients after deep brain stimulation of the subthalamic nucleus*. J Neurol Neurosurg Psychiatry. 2004;75(9):1260–1264.

BDI, Beck Depression Inventory; ED, Erectile Dysfunction; FSFI, Female Sexual Function Index; IIEF, International Index of Erectile Function; MDS-UPDRS III, Movement Disorders Society-Unified Parkinson’s Disease Rating Scale Part III; PDQ-39, 39-item Parkinson’s Disease Questionnaire; SD, Sexual Dysfunction.



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