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DIFFERENTIAL IMPACT OF DEEP BRAIN STIMULATION OR ANTERIOR CAPSULOTOMY ON GENERAL FUNCTIONING, PERSONALITY FEATURES AND QUALITY OF LIFE IN OCD

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Introduction: Research on deep brain stimulation (DBS) for treatment refractory obsessive-compulsive disorder (OCD) shows promising effects on symptoms severity.

Objectives: To compare outcomes between DBS and bilateral capsulotomy on general functioning, personality traits and quality of life.

Methods: Consecutive patients with severe and treatment refractory OCD underwent DBS in the anterior limb of the internal capsule (DBS; n=14) or anterior capsulotomy (CAPS; n=14). They were tested before surgery (baseline-BL) and after a mean follow-up time (FU) of 19 months (range 14-31 months). Changes in OCD severity were recorded and global assessment of functioning, personality traits, and quality of life were compared between groups.

Results: Statistically significant differential improvements ($p < 0.05$, Bonferroni corrected) were seen in

*General assessment of functioning (Mn±95%CI)

GAF: DBS_BL:32.9±3.6; DBS_FU:68.6±7.2; CAPS_BL:35.0±2.7; CAPS_FU:56.4±5.9)

*Personality traits on MMPI (T-score Mn±95%CI)

Scale 2-depression: DBS_BL:83.7±6.5; DBS_FU:61.9±6.3; CAPS_BL:81.2±8.6;

CAPS_FU:77.6±8.7

Scale 9-mania: DBS_BL:48.8±7.3; DBS_FU:57.0±4.2; CAPS_BL:53.8 ±7.5;

CAPS_FU:45.6±6.2

Scale 0-social introversion: DBS_BL:66.8±5.2; DBS_FU:56.1±4.1; CAPS_BL:67.7±7.0;

CAPS_FU:66.4±5.8)

* Quality of life: Q-LES-Q Endicott (Mn±95%CI)

overall score (1-5): DBS_BL:1.2±0.3; DBS_FU:3.4±0.6; CAPS_BL:1.5±0.3;

CAPS_FU:2.6±0.4

and in the sub domains

feelings (%): DBS_BL:36.8±4.2; DBS_FU:68.6±8.8; CAPS_BL:39.1±5.1;

CAPS_FU:54.0±5.9

leisure activities (%): DBS_BL:30.6±5.9; DBS_FU:68.5±7.9; CAPS_BL:40.2±5.4;

CAPS_FU:58.3±7.1

social relationships (%):DBS_BL:43.9±5.5; DBS_FU:70.2±8.0; CAPS_BL:46.9±6.8;

CAPS_FU:60.1±6.9

Conclusion: These findings suggest a superior impact of DBS over capsulotomy on general functioning, personality traits and quality of life. Limits of this study are the small numbers, the fact that DBS and CAPS patients were from a slightly different OCD population and were not randomized to treatment, and differences in postoperative follow-up.