Personality and behaviour after Deep Brain Stimulation: do we know what happens next?

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Abstract

Introduction: Deep Brain Stimulation (DBS) is widely performed in advanced Parkinson Disease and other neurological diseases. However changes in behaviour and personality have been reported. Their implications on the quality of life for patients and their families are yet to be clarified.

Objectives: The aim of this work was to search for the most significant alterations in personality and behaviour in patients submitted to DBS.

Methods: We performed a search on the Anglo-Saxon literature, the EMBASE, MEDLINE and PubMed were consulted using the following key words: "deep brain stimulation", "personality", "behaviour" and "ethical".

Results: The most common cognitive and psychiatric problems that have been reported concern a decline in word fluency and verbal memory, depression, increased suicide tendencies, anxiety, emotional hyperreactivity, hypomania, increased impulsivity, lack of premeditation and lower persistence. These changes in mood, behaviour and cognition may lead to changes in "personal identity" and eventually affect others.

Discussion and Conclusion: There are medical and ethical issues concerning such a dramatic change in some patient’s identity. The increasing use of DBS will lead to discussions concerning their responsibility for their actions and ability to make decisions. More research is need in order to clarify these changes and to establish predictors and related factors.

Supplementary material: Complete presentation available at http://ijcnmh.arc-publishing.org

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