In order to better assess the adequacy of current Parkinson disease (PD) treatments, healthcare providers have increasingly utilized various patient-based outcome measures, such as health status (HS) and health-related quality of life (HRQoL). HS questionnaires focus on the presence of symptoms (e.g. motor dysfunction, fatigue, pain, embarrassment or loneliness) and their impact on one’s ability to perform various life activities (e.g. housework, bathing, communicating or leisure activities), while HRQoL instruments measure a patient’s subjective experience of symptoms and satisfaction with health conditions. HRQoL differs from HS in that it gauges not only the presence and severity of functional limitations, but to what extent such restrictions actually disturb the individual.[1,2]

Multiple previous publications have aimed to assess the effect of DBS on HRQoL in patients with PD; however, all have employed questionnaires (such as the PDQ-39 and PDQ-L) that evaluate HS, thus providing only an approximation of HRQoL.[1,2,4,5] The present study, in analyzing the high frequency subthalamic nucleus (STN) deep brain stimulation (DBS) on HRQoL, using a recently validated instrument, the Questions on Life Satisfaction (QLSM) modular questionnaire, which was specifically designed for DBS patient population.[6]

**Introduction**

**Methods**

We enrolled 23 consecutive patients with PD, defined according to the UK Parkinson Disease Brain Bank criteria,[7] who underwent DBS at the neurosurgical unit of Memorial Hermann Texas Medical Center in Houston, Texas. All patients were treated by one surgeon, who introduced a cylindrical lead oriented to the STN, and any resulting complications referring to medical management and neurosurgical intervention for PD.[8] In addition to the recommendations of the Parkinson’s Disease Society of America, at least three years following surgery, all patients were followed up for 12 months (at least) for assessment of complications and functional status. All patients were followed up for 12 months from the time of surgery.

We measured HRQoL before and three months following DBS surgery using the QLSM.[9] The QLSM questionnaire is specifically designed for DBS patient population.[6] It is an instrument that contains 3 modules which address general satisfaction (QLSM-A), general health satisfaction (QLSM-G), and movement disorder satisfaction (QLSM-MD). The QLSM-A module is divided into two sections: one assessing the importance of various items and the other rating the importance of the satisfaction associated with each item. The QLSM-MD module is composed of 12 items, the QLSM-G module is composed of 10 items, and the QLSM-A module is composed of 6 items. For each of these items, satisfaction and satisfaction scores for each item are combined to provide information about weighted satisfaction; accordingly, scores reflect one’s satisfaction with items that one considers to be important. Weighted satisfaction scores range between 0 and 1, with higher scores indicating an increase in satisfaction for that item. The QLSM-A module contains 12 items, and the QLSM-G module contains 10 items, which addresses general life satisfaction, general health and movement disorder satisfaction. The QLSM-MD module contains 6 items, which addresses movement disorder satisfaction. Each item is rated from 0-100, with 100 being the highest satisfaction. The QLSM-A module contains 12 items, the QLSM-G module contains 10 items, and the QLSM-MD module contains 6 items. Each item is rated from 0-100, with 100 being the highest satisfaction.

We used the 10-question version of the 36-item short-form health survey (SF-10), which was specifically designed for DBS patient population. The SF-10 consists of 10 items that are combined to provide information about weighted satisfaction; accordingly, scores reflect one’s satisfaction with items that one considers to be important. Weighted satisfaction scores range between 0 and 1, with higher scores indicating an increase in satisfaction for that item. The SF-10 module contains 10 items, which addresses general satisfaction, general health satisfaction, and movement disorder satisfaction. Each item is rated from 0-100, with 100 being the highest satisfaction. The SF-10-A module contains 5 items, the SF-10-G module contains 3 items, and the SF-10-MD module contains 2 items. Each item is rated from 0-100, with 100 being the highest satisfaction.

The SF-10 questionnaire was used as an expanded version of the Questions on Life Satisfaction (QLSM). The SF-10 questionnaire is specifically designed for DBS patient population.[6] It is an instrument that contains 3 modules which address general satisfaction (QLSM-A), general health satisfaction (QLSM-G), and movement disorder satisfaction (QLSM-MD). The SF-10-A module is divided into two sections: one assessing the importance of various items and the other rating the importance of the satisfaction associated with each item. The SF-10-G module is composed of 10 items, the SF-10-D module is composed of 10 items, and the SF-10-MD module is composed of 6 items. For each of these items, satisfaction and satisfaction scores for each item are combined to provide information about weighted satisfaction; accordingly, scores reflect one’s satisfaction with items that one considers to be important. Weighted satisfaction scores range between 0 and 1, with higher scores indicating an increase in satisfaction for that item. The SF-10-A module contains 10 items, the SF-10-G module contains 10 items, and the SF-10-MD module contains 6 items. Each item is rated from 0-100, with 100 being the highest satisfaction. The SF-10-A module contains 5 items, the SF-10-G module contains 3 items, and the SF-10-MD module contains 2 items. Each item is rated from 0-100, with 100 being the highest satisfaction.

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