Parkinson’s disease was first described by Dr James Parkinson nearly 200 years ago. He described the classic triad of tremor, rigidity and bradykinesia in these patients. These problems were successfully reduced with the advent of levodopa. As an unexpected consequence, other non-motor symptoms such as cognitive, affective, autonomic and sensory disturbances became more apparent. This has led to the growing realization that good management of Parkinson’s disease has to encompass both successful drug therapy and minimising the impact of the disease on health-related quality of life. (1)

In the United Kingdom, 100 – 180 per 100,000 of the population are estimated to be living with Parkinson’s disease. (2) Approximately 1% of individuals over the age of 65 are affected with Parkinson’s disease, and 8.7 million people worldwide are projected to be affected by 2030. (2) It is a relentlessly progressive and debilitating neurological condition. Parkinson’s disease has no cure, and with longer life expectancies, patients are often left with chronic extensive disabilities and a poor quality of life. There is a huge burden that Parkinson’s disease causes to the patient, family and health services. It is therefore important that our management of such patients must be optimal.

Modern clinical trials have recognized the importance of non-motor elements in Parkinson’s disease, which are now routinely considered when measuring outcomes in patients. These non-motor symptoms affect the patient in all aspects of their lives. Having achieved considerable success in the control of motor symptoms with modern drug therapy, the challenge for further improvement of outcomes in patients with Parkinson’s disease now lies in improving their quality of life. (1) This has heralded the development of the multidisciplinary approach towards patient management. This essay will discuss how we, as healthcare professionals of various disciplines, can make a difference to the patient’s quality of life and therefore improve patient outcomes.
The first step towards improving the outcomes of Parkinson’s disease is to be aware of and to identify the problems that patients face. These problems can broadly be classified into motor and non-motor symptoms. The motor problems that patients face are well documented. The most problematic motor symptoms have been effectively controlled in most cases with advancements in medical and surgical therapy such as deep brain stimulation.

The current challenge to doctors in improving quality of life with drug therapy lies in deciding when and which drugs to initiate management with. Levodopa is the most effective but causes an earlier onset of motor complications. Patients usually begin to report greater difficulties in activities of daily living and a poorer quality of life with motor complications. The goal for the management of current drug therapy is to achieve a tolerable balance between symptomatic relief and future complications. (3) Doctors are also poor at recognising that hypersomnolence, and compulsive behaviours such as pathological gambling and hypersexuality are possible side effects of dopamine agonist therapy. (3) Early identification and intervention can limit any potential financial or relationship repercussions. (3) In addition, it was shown that doctors faired poorly at communicating their diagnoses to patients. (1) An international survey showed that patients who felt satisfied with the explanation of the condition at diagnosis by the doctor, or who left the consultation feeling optimistic, had a significant improvement on reported quality of living. (1) These are several challenges for the doctor to improve on.

Drug therapy can further improve outcomes of patients with Parkinson’s disease through the concept of neuroprotection. The absence of disease-modifying therapies implies that patients are still left with marked disabilities despite the continual improvements made in symptomatic drug therapy. Unfortunately, no treatment, vitamins or supplements have shown any conclusive benefit. However, co-enzyme Q10, and more recently, non-aspirin non-steroidal anti-inflammatory drugs may have potential neuroprotective benefits. (4) There has also been research into neurosurgical neurorestoration via transplanting neural tissue or stem cells into the degenerated brain.
However, further research is still required to refine the procedure. Once such neuroprotective or neurorestorative techniques are available in future, it may be possible to halt or even reverse the progression of Parkinson’s disease. (3)

Unfortunately, such treatments are unavailable at present. In the meantime, the focus should therefore be on what can be done to improve the patient’s quality of life. This is where motor, and more importantly, non-motor symptoms exert their greatest influence on patient outcome. Non-motor symptoms are difficult to treat and often respond poorly or may be exacerbated with current drug therapy. These problems usually overshadow motor problems in advanced stages of the disease. (3)

Patients often complain of mental health problems such as depression, dementia or psychosis. Parkinson’s disease also causes autonomic dysfunction, and therefore problems such as dysphagia, constipation, genitourinary dysfunction and orthostatic hypotension are common. Other symptoms include sleep disorders, weight loss, increased levels of pain, olfactory dysfunction and an increased number of falls. (2) The patient must be made aware that when faced with such problems, that firstly it may possibly be due to Parkinson’s disease, and that secondly there are services available for assistance.

Various drugs can be prescribed for symptomatic management of the non-motor symptoms. For example, laxatives are useful in relieving constipation, while beta-blockers can reduce orthostatic hypotension. However, the effects of drug therapy are best complemented with the efforts of the various other therapists to optimise the patient’s quality of life. Management throughout Parkinson’s disease should be guided by the principles of palliative care, and not limited only to the later stages. The aim should be to achieve the best possible quality of life for patients and families, through the prevention of suffering by early identification and assessment of any physical, psychological or social issues. (2) A multi-disciplinary approach towards the management of patients with Parkinson’s disease is able to achieve such goals.
A study in Sydney following 146 patients with Parkinson’s disease found that at the end of 10 years, a quarter of all patients ended up in nursing homes and only four patients still remained in employment. (5) This highlights how greatly debilitating the effects of Parkinson’s disease can be on the patient.

Physiotherapists and occupational therapists play an important complementary role in managing the symptoms and their impact on patients’ lives. Patients can become significantly disabled to the extent of requiring help for all activities of daily living. Physiotherapy maximizes the patient’s functional ability and minimise any secondary complications through educating and supporting the patient in movement rehabilitation and constant physical exercise. Current evidence shows that physiotherapy improves both motor symptoms and quality of life. (6) Occupational therapy aims to maintain a balance between the abilities of a person and the demands made of him by the environment and daily living. Occupational therapists support the individual to maintain their usual levels of activity for as long as possible, reducing stress and improving quality of life in patients. (7)

Speech and language therapists have been shown to be beneficial in improving the intelligibility of dysarthric patients with Parkinson’s disease. The retention of communication skills in patients is essential in improving the patient’s perceived quality of life. (8) Together with dieticians, they can also assist the dysphagic patient and ensure that common problems such as constipation, aspiration and malnutrition secondary to dysphagia are minimal. (8) The impact of mental health issues is greatly significant. There is a very high prevalence of depression, psychosis and dementia in patients with Parkinson’s disease. Depression was cited as the main reason for a decreased quality of life in 40% of patients, while motor symptoms only amounted to 17%. (9) The presence of mental health illnesses leads to an increased need for nursing home placements and higher mortality rates. (3) Healthcare professionals must therefore be alert to such symptoms and have a low threshold for diagnosing any mental illnesses so that appropriate treatment can be commenced. (9)
There are many disparate elements working in tandem in the management of Parkinson’s disease. The role of the specialist nurse is to assist the doctor in coordinating the various aspects of the patient’s care and act as a continual source of patient support. They monitor patients’ clinical progressions and make necessary adjustments to treatment regimes. They are reliable sources of both clinical and social information to both the patient and their family members or carers. Patients have reported having a greater sense of wellbeing when under the care of the specialist nurses. (10)

The impact of Parkinson’s disease on the patient and the people around is multi-dimensional and complex. There is great potential in improving the outcome of patients in future through neuroprotective drugs and neurorestorative surgery. Until then, we as healthcare professionals – doctors, nurses, or therapists, are in the best position to greatly influence and improve the quality of life and subsequently the outcome of our patients. We each have our own areas of expertise to contribute towards a well organised multi-disciplinary care approach for our patients. Good communication and teamwork is essential to coordinate our efforts and ensure that the patient with Parkinson’s disease under our care gets the best possible standard of care.

(1500 words)
References


