Deep brain stimulation helps treat Parkinson’s symptoms

While it won’t cure Parkinson’s disease nor halt its progress, deep brain stimulation (DBS) can help patients manage symptoms like trembling, slowed movement and abnormal muscle movements.

“Deep brain stimulation physically involves the insertion of electrodes deep within the brain that are electrically stimulated to control the adverse symptoms of Parkinson’s disease,” explained Sharon Powell, a registered nurse and DBS coordinator at University of Maryland Medical Center in Baltimore.

“It’s not curing the disease,” she said. “It’s interrupting the abnormal electrical impulses the brain is sending out.”

Unlike other treatments for the neurological disease, Ms. Powell noted that DBS doesn’t damage healthy brain tissue by destroying nerve cells. The procedure is fully reversible if newer treatments develop in the future through stem-cell or other areas of research, she said.

According to information provided by the University of Maryland, DBS involves the implantation of a battery-operated neurotransmitter under the collarbone. Attached to this device is a wire with an electrode at the end. The wire is inserted under the skin and led up the neck to the scalp, where it is placed through a small hole in the skull. The electrode is attached to the thalamus in the brain.

Ms. Powell, a parishioner of St. Elizabeth Ann Seton in Crofton, described DBS as “incredibly effective.” Patients who have a history of Parkinson’s and who do not have adequate control of their symptoms with medications are the best candidates for the procedure, she said.

“People who undergo the procedure would take the same precautions as someone who has a cardiac pacemaker,” she said. “They can’t go through the screening machine at the airport, for example.”

Approximately one million Americans suffer from Parkinson's disease, with about 40,000 new diagnoses each year, according to the Stanford School of Medicine in California. The disease occurs when brain cells that produce dopamine, a neurotransmitter essential for movement and coordination, begin to malfunction and die. The exact cause of the cell death is unknown.

The Federal Drug Administration approved DBS in January 2002 for the treatment of Parkinson's disease after previously approving it for the treatment of Essential Tremor.

The University of Maryland neurology department hosts free monthly education sessions about DBS. For more information, call 410-328-7797 or visit www.umm.edu/parkinsons/.