Public Statement:

The globus pallidus is an area of the brain involved in the development of Parkinson’s disease. Stereotactic radiofrequency pallidotomy is an ablative procedure during which a radiofrequency electrode is used to create thermal lesions within an anatomically and physiologically defined region of the globus pallidus. This procedure is covered in certain patients with severe Parkinson’s that has become non-responsive to levodopa therapy.

Medical Policy Statement:

1) Stereotactic radiofrequency unilateral pallidotomy with microelectrode mapping is considered medically necessary for patients who must meet all of the following selection criteria:

   o The patient has a diagnosis of idiopathic Parkinson’s disease;
   o The patient’s disease was previously responsive to levodopa therapy but is now medically intractable;
   o The patient has severe levodopa-induced dyskinesia or disease characterized particularly by severe bradykinesia, rigidity, tremor, or dystonia, or by marked “on-off” fluctuations;
   o The patient does not have evidence of dementia; and
   o The patient is fully informed of the risks and benefits of the surgery, including the specific mortality and morbidity experience of the facility where the procedure is to be performed.
2) Unilateral stereotactic radiofrequency pallidotomy without microelectrode mapping or bilateral stereotactic radiofrequency pallidotomy are considered investigational and are not covered.

Background:

Several studies have reported minimal neuropsychological or psychiatric changes in those undergoing unilateral pallidotomy. A few studies focusing on bilateral pallidotomy were identified. Merello and colleagues initiated a study that intended to randomize patients to bilateral pallidotomy or pallidotomy on one side, with deep brain stimulation of the globus pallidus on the contralateral side. The protocol was discontinued after the first 3 patients undergoing bilateral pallidotomy suffered severe adverse corticobulbar effects. Intemann and colleagues reported that staged bilateral pallidotomy resulted in further improvements in some symptoms in a series of 11 patients, but there were significant adverse effects, including 5 patients with worsening of speech and memory. Due to the potential for increased adverse outcomes with bilateral pallidotomy, it is likely that deep brain stimulation is preferable for bilateral procedures, either in combination with an initial pallidotomy followed by deep brain stimulation on the contralateral side, or bilateral deep brain stimulation. It should be noted that there have been no controlled trials comparing deep brain stimulation with pallidotomy.

A systematic review on the efficacy of pharmacological and surgical treatments of Parkinson's Disease was published in 2004 representing a follow-up of an evidence based review published 2 years earlier. Based on two new small randomized controlled trials, the authors concluded that unilateral pallidotomy was efficacious for symptomatic control of Parkinsonism, and efficacious for control of motor fluctuations and dyskinesias. The procedure was considered to have acceptable safety risk. It was considered investigational for the prevention of clinical progression of disease.

References:


Application to Products

This policy applies to ARBenefits. Consult ARBenefits Summary Plan Description (SPD) for additional information.

Last modified by:    Date: