Clinical Policy Bulletin:
Selective Peripheral Denervation (Bertrand Procedure) for Spasmodic Torticollis

Number: 0401

Policy

Aetna considers selective peripheral denervation (Bertrand procedure) medically necessary for the treatment of members with severe spasmodic torticollis (cervical dystonia) when both of the following criteria are met:

- Current symptoms are disabling; and
- Member has failed an appropriate course of pharmacotherapies or has had adverse side effects from the medications or the member has developed resistance to botulinum toxin type A or type B.

Aetna considers selective peripheral denervation experimental and investigational for the treatment of members with severe spasmodic torticollis when criteria are not met because the value of this procedure in persons without disability or in persons who have not failed medical management is unproven.

Aetna considers combined selective peripheral denervation and deep brain stimulation experimental and investigational for the treatment of spasmodic torticollis because the effectiveness of this approach has not been established.

See also CPB 0113 - Botulinum Toxin.

Background

Spasmodic torticollis (cervical dystonia), or torticollis, is the most common of the focal dystonias. It is a disorder in which neck muscles contract involuntarily, resulting in abnormal movements and posture of the head and neck. In general, the term -- spasmodic torticollis (ST) -- is used to describe spasms in any direction: forward (anterocollis), backward (retrocollis), and sideway (torticollis).
The movement may be sustained or jerky. Spasm in the muscles or pinching nerves in the neck can result in severe pain. In this regard, cervical pain is seen in approximately 80% of patients with ST. Torticollis generally occurs in middle age; beginning slowly and usually reaching a plateau. Approximately 10 to 20% of individuals with this condition experience a spontaneous remission; however, the remission may not be permanent.

Since the cause of ST is unknown, there is currently no cure for this disorder. Treatment is geared towards symptomatic relief. Various medications are used in treating this condition. Botox (botulinum toxin type A) injections have been demonstrated to improve both pain and head position in 70 to 80% of patients with ST. The toxin is injected into the 2 or 3 most functionally active muscles, most commonly the sternomastoid, spenius capitus or trapezius.

In very severe cases of disabling ST when pharmacotherapies including Botox injections have failed or the side effects are too severe, selective peripheral denervation may offer relief of symptoms. Selective peripheral denervation is a procedure in which nerves are removed at the point where they enter the selected hyperactive muscles; while innervation to uninvolved muscles is maintained. Studies have indicated that this procedure is useful in selected patients. Positive response to prior botulinum toxin therapy appears to be a very good indicator of outcome following selective peripheral denervation.

A systematic evidence review of dystonias by the EFNS/MDS-ES Task Force (Albanese, et al., 2006) concluded: "Selective peripheral denervation is a safe procedure with infrequent and minimal side effects that is indicated exclusively in cervical dystonia. This procedure requires a specialized expertise."

Guidance from the National Institute for Clinical Excellence (2004) concluded: "Current evidence on the safety and efficacy of selective peripheral denervation for cervical dystonia appears adequate to support the use of this procedure provided that the normal arrangements are in place for consent, audit and clinical governance." The guidance stated that "patient selection for this procedure is important" and that "patients should be offered the procedure only when their disease has become refractory to best medical treatment." Standard medical treatments for cervical dystonia identified by NICE includes physiotherapy, drugs to reduce spasm, and injections of botulinum toxin. The NICE guidance said that selective peripheral denervation may be an alternative, especially for people who have not responded to other treatments.

Wang and colleagues (2015) noted that selective peripheral denervation (SPD) is currently the primary surgical treatment for ST. These investigators reported on the outcome of patients treated with this procedure for ST in their department. Between June 1995 and June 2013, a total of 648 patients underwent SPD for ST. Participants included 293 women (45.2%) and 355 men (54.8%) with a mean age of 41.1 years (range of 8 to 74 years) at the onset of dystonia. Surgery was performed at a mean of 3.6 years (range of 1 to 32 years) after onset of symptoms. Data on clinical presentation, radiological studies, operation tragedy, clinical outcomes and complications were analyzed retrospectively. For evaluation of clinical outcomes, patients' responses were assessed using the Toronto Western Spasmodic Torticollis Rating Scale (TWSTRS). Results were obtained from all 648 patients with a follow-up period ranging from 11 months to 154
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months (mean of 33.4 months). The mean pre-operative TWSTRS score was 54.7 ± 18.3 points (range of 39 to 67 points), which decreased to 31.1 ± 11.6 points post-operatively (range of 1 to 67 points); a significant improvement was observed between pre-operative and post-operative TWSTRS evaluation; the clinical improvement of TWSTRS was 73.5 ± 11.9 %. In addition, no deaths and serious complications occurred in this cohort of patients. The authors concluded that SPD is an effective surgical method for patients with ST. This procedure should be recommended if conservative therapy does not offer satisfactory relief of symptoms.

**Combined Selective Peripheral Denervation and Deep Brain Stimulation:**

Chung et al (2015) stated that SPD and deep brain stimulation of the globus pallidus (GPi-DBS) are available surgical options for patients with medically refractory cervical dystonia (CD). There are few data available concerning whether patients who have unsatisfactory treatment effects after primary surgery benefit from a different type of subsequent surgery. These researchers examined if combining these surgical procedures (SPD plus GPi-DBS) was effective in patients with unsatisfactory treatment effects after their initial surgery. A total of 41 patients with medically refractory idiopathic CD underwent SPD and/or GPi-DBS. Patients who were dissatisfied with their primary surgery (SPD or GPi DBS) elected to subsequently undergo a different type of surgery. These patients were assessed with the TWSTRS. Selective peripheral denervation alone and GPi-DBS alone were performed in 16 and 21 patients, respectively. Four patients had unsatisfactory treatment effects after the initial surgery and subsequently underwent another type of surgery. Among them, 2 patients with persistent dystonia after SPD subsequently underwent GPi-DBS, and 2 other patients who had insufficient treatment effects following GPi-DBS were subsequently treated with SPD. All of these patients experienced sustained improvement from the combined surgical procedures according to the TWSTRS score during a long-term follow-up of 12 to 90 months. The authors concluded that patients with unsatisfactory treatment effects after an SPD or GPi-DBS experienced improvement from subsequently undergoing other types of surgery. They stated that combined surgical procedures are additional surgical options with good outcomes in the treatment of patients with residual symptoms after their initial surgery. The main drawback of this study was its small sample size – only 4 patients combined surgical procedures (SPD and GPi-DBS).

CPT Codes / HCPCS Codes / ICD-9 Codes

**There is no specific code for Selective Peripheral Denervation (Bertrand Procedure) for Spasmodic Torticollis:**

**Other CPT codes related to the CPB:**

64616 Chemodenervation of muscle(s); neck muscle(s), excluding muscles of the larynx, unilateral (eg, for cervical dystonia, spasmodic torticollis)
64640 Destruction by neurolytic agent; other peripheral nerve or branch

Other HCPCS codes related to the CPB: J0585

Botulinum toxin type A, per unit

J0587 Botulinum toxin type B, per 100 units

ICD-9 codes covered if selection criteria are met:

333.83 Spasmodic torticollis [severe, disabling]

The above policy is based on the following references:


outcomes. Participating providers are independent contractors in private practice and are neither employees nor agents of Aetna or its affiliates. Treating providers are solely responsible for medical advice and treatment of members. This Clinical Policy Bulletin may be updated and therefore is subject to change.

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