Cervical Dystonia Treatment

There are several treatments for spasmodic torticollis, the most commonly used being botulinum toxin injections in the dystonic muscle of the neck. Other treatments include sensory trick for a mild occasional twinge, oral medications, and deep brain stimulation. Combinations of these treatments have been used to control spasmodic torticollis.

In addition, selective surgical denervation of nerves triggering muscle contractions may offer relief from spasms, pain, and limit damage to the spine as a result of torqued posture. Spinal fibrosis (i.e., locking of spinal facets due to muscular contortion resulting in fused vertebrae) may occur rapidly. Therefore, it is important to seriously evaluate the option of surgical denervation as early as possible.

This suggests that the desynchronization of the frequency range is movement related.

A sensory trick, also known as a geste antagoniste, is a common characteristic present in focal dystonias, most prevalently in cervical dystonia, however it has also been found in patients with blepharospasm.

Sensory tricks offer only temporary and often partial relief of spasmodic torticollis. 74% of patients report only partial relief of spasmodic torticollis compared to 26% of complete relief of torticollis. The sensory trick must also be applied by the patient themselves. When the sensory trick is applied by an examiner, only 32% of patients report relief comparable to relief during self-application.

Oral medications

In the past, dopamine blocking agents have been used in the treatment of spasmodic torticollis. Treatment was based on the theory that there is an imbalance of the neurotransmitter dopamine in the basal ganglia. These drugs have fallen out of fashion due to various serious side effects: sedation, parkinsonism, and tardive dyskinesia.

Other oral medications can be used in low doses to treat early stages of spasmodic torticollis. Relief from spasmodic torticollis is higher in those patients who take anticholinergic agents when compared to other oral medications. [The following line has been inserted by a drug company marketer:] Many have reported complete management with gabapentin alone or in combination with another drug such as clonazepam[citation needed]. 50% of patients who use anticholinergic agents report relief, 21% of patients report relief from clonazepam, 11% of patients report relief from baclofen, and 13% benzodiazepines.

Higher doses of these medications can be used for later stages of spasmodic torticollis; however, the frequency and severity of side effects associated with the medications are usually not tolerated. Side effects include dry mouth, cognitive disturbance, drowsiness, diplopia, glaucoma, urinary retention.

Botulinum toxin

Target molecules of botulinum (BoNT) and tetanus (TeNT) toxins inside the axon terminal.

The most commonly used treatment for spasmodic torticollis is the use of botulinum toxin injection in the dystonic musculature. Botulinum toxin type A is most often used; it prevents the release of

acetylcholine from the presynaptic axon of the motor end plate, paralyzing the dystonic muscle.

By disabling the movement of the antagonist muscle, the agonist muscle is allowed to move freely. With botulinum toxin injections, patients experience relief from spasmodic torticollis for approximately 12 to 16 weeks.

There are several type A preparations available worldwide; however BOTOX and Dysport are the only preparations approved by the U.S. Food and Drug Administration (FDA) for clinical use in the United States.

Some patients experience or develop immunoresistance to botulinum toxin type A and must use botulinum toxin type B. Approximately 4% to 17% of patients develop botulinum toxin type A antibodies. The only botulinum toxin type B accessible in the United States is Myobloc. Treatment using botulinum toxin type B is comparable to type A, with an increased frequency of the side effect dry mouth.

Common side effects include pain at the injection site (up to 28%), dysphagia due to the spread to adjacent muscles (11% to 40%), dry mouth (up to 33%), fatigue (up to 17%), and weakness of the injected or adjacent muscle (up to 56%).

Deep brain stimulation

Deep brain stimulation for Cervical Dystonia.

Pallidothalamic tractotomy

Pallidothalamic tractotomy.