TMS TRENDS

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According to the replication study of the National Comorbidity Survey (NCS-R), there are an estimated 14 million US adults in the US who meet criteria for Major Depressive Disorder in any one year period of time. The NCS-R provides the most up to date estimates of the prevalence and morbid consequences of major psychiatric disorders in the US. Sadly, only slightly more than half of these individuals with depression seek treatment, and of these approximately 7 million people, less than half (3.2 million) are adequately treated. This leaves 4 million people who are poorly served, resulting either from an inadequate response or intolerance to the adverse effects of treatment.

When antidepressant medications fail to produce a positive response, atypical antipsychotic medication may be used as an augmenting agent. In other words, these medications have not been shown to have antidepressant efficacy on their own, but appear to boost the effectiveness of a primary antidepressant to which the patient may not have or only partially has responded. Presently these agents include aripiprazole (Abilify), the combination of fluoxetine and olanzapine (Symbyax) and quetiapine (Seroquel).

Nonpharmacologic treatment options for treatment-resistant depression include device-based therapies such as electroconvulsive therapy (ECT), vagal nerve stimulation (VNS), and deep brain stimulation (DBS).

Of these therapies, this article will focus on TMS, the least invasive option with the lowest morbidity and mortality and ease of use.

Although a number of manufacturers of TMS devices exist worldwide, only the NeuroStar TMS Therapy system is approved in the USA. (The manufacturer, Neuronetics, is based in Malvern, PA). NeuroStar TMS therapy is a non-invasive and non-systemic therapy for treatment- refractory depression. It is safe, effective and well-tolerated with a low incidence of side effects due to treatment. There is no pre-treatment anesthesia or sedation required and the patient can transport themselves to and from treatment each day. A standard treatment session lasts approximately 37 minutes and treatment consists of daily (Monday-Friday) sessions for 4-6 weeks. This treatment device is designed to be used as an outpatient, office-based procedure, however, many hospitals, including the top 7 best psychiatric medical centers as reported in this year's U.S. News & World Report ranking offer this treatment.

During the clinical studies that were conducted at 23centers in the U.S, Canada and Australia which led the FDA approval in 2008, over 10,000 treatments were performed. There were no seizures or serious adverse events and there were no systematic side effects such as weight gain, sexual dysfunction, nausea, dry mouth or sedation.

For those depressed patients who have not responded well to traditional pharmacotherapy, TMS therapy may be the right choice