Treatment-Resistant Depression: A Growing Concern Among the Elderly

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Abstract:

Depression is a common concern in the elderly population which can further exacerbate other chronic medical conditions. We present a case of a geriatric patient who experienced persistent depressive symptoms despite multiple trials of first-line treatments. The patient's depression significantly impacted their quality of life and posed challenges for their caregivers. Given the treatment-resistant nature of the condition and limited therapeutic options, electroconvulsive therapy (ECT) was initiated. The patient underwent a series of ECT sessions, resulting in marked improvements in depressive symptoms and overall functioning.

Introduction:

Depression is one of the most prevalent mental disorders in the aging population. Up to 10% of older adults seen in primary care and 30-50% of those in institutional/long-term care facilities suffer from clinically significant depression [1-3]. When it is not successfully treated, depression becomes a persistent problem in as many as 40% of older adults [4-5]. Rates of chronic depression are particularly high in individuals with chronic medical illnesses. Treatment options become limited once individuals exhaust most of the recommended therapies. As primary care providers, we often face the complexity of managing depression in the elderly and how devastating it could be to the patient and their caregivers.

Case Presentation:

An 85-year-old male presented to a geriatric clinic with a past medical history of congestive heart failure (CHF), irritable bowel syndrome (IBS), osteopenia, refractory depression with passive suicidal ideation, new onset drug-induced parkinsonism, and ambulatory dysfunction post COVID. The patient was hospitalized a year prior due to similar suicidal ideation. He was initially doing well on duloxetine and aripiprazole, which was discontinued due to parkinsonian-like symptoms. His history showed that he had been on several classes of antidepressants (i.e. SSRI, SNRI, atypical antidepressants, and antipsychotics), however, nothing alleviated the symptoms. He was also undergoing counseling, but there was no improvement in his signs and symptoms of depression. Genesight psychotropic test was performed which showed resistance to all classes of drugs that he had been previously taking. He was further managed as treatment-resistant depression and was offered ECT. Our team opted to pursue ECT vs ketamine therapy due to the patient's age. The patient was initially on a three-times-per-week schedule and soon tapered to weekly treatments. His antidepressants were also slowly weaned down. The patient and his caregiver noted significant improvement just after the first week of ECT; he had become more independent in his activities of daily living (ADLs) and no longer expressed any active suicidal ideation.

Discussion:

ECT remains the gold standard of treatment for resistant depression, despite the stigma associated with its adverse effects. It has been used with various patients and is crucial in managing depression in older individuals and those who do not respond to pharmacotherapy, who express suicidal ideation, and with comorbid psychosis, bipolar depression, or severe catatonia. In geriatric patients, ECT achieves a faster and more complete remission rate [6,7]. It has also been shown to play a role in treating superimposed mood disorders [8]. In conditions such as mild cognitive impairment (MCI), dementia, Parkinson's disease (PD), and stroke, ECT has been proven to enhance clinical results, reducing the percentage of life years spent with untreated depression from 50.2% to 32.9% over a four-year period. Patients who have previously undergone two to three different treatment regimens find ECT to be cost-effective as well [7]. Recent studies indicate that ECT does not worsen memory impairment in geriatric patients. ECT utilizes electrodes placed on the patient's head to administer an electrical stimulus, which depolarizes neurons in the brain and induces a seizure in an anesthetized patient [9]. This results in positive physiological changes in the brain. When considering ECT for a patient, it is essential to provide educational materials such as tutorials, brochures, family discussions, and videos to the patient before initiating treatment [8]. Prerequisites for geriatric patients undergoing ECT include standardized medical assessments, cardiology, neurology, pulmonology, and anesthesia reviews to prevent potential complications. Patients over the age of 50 should have their electrolytes, complete blood count, and EKG evaluated, along with assessing the status of any other pre-existing comorbid conditions. ECT is safe for patients with pacemakers, atrial fibrillation, a history of abdominal aortic aneurysms, and intracranial aneurysms. A typical acute ECT treatment involves three sessions per week for 6-12 weeks. Clinical response is usually observed after this regimen, and it is advisable to discontinue treatment if a clinical response is observed or if the patient has plateaued [9]. Maintenance ECT, along with pharmacotherapy, has been proven to be effective in the treatment of resistant depression, resulting in lower readmission rates and shorter hospitalization stays [8]. It is recommended for severely ill patients with a psychotic spectrum illness [9]. Studies demonstrate that depressive symptoms can be successfully treated regardless of pre-existing cognitive impairment and that ECT only causes brief and temporary cognitive abnormalities in patients without dementia [6]. The most common side effects of ECT include headache, muscle pain, and nausea, with a risk of serious complications such as prolonged seizures and death. The risk of mortality secondary to ECT, however, is approximately 1 in 10,000 patients [9]. In the geriatric population, ECT is becoming an important therapy method for relapse prevention [6].

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