Treatment of Patients with Major Depressive Disorder and Suicidal Thoughts and Behaviors: An Electronic Health Record Database Study

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Abstract

Study Objective. The population of patients with major depressive disorder (MDD) and suicidal ideation (SI) or behaviors/attempts (SA) is not well characterized. Electronic health records (EHR) may contain useful data elements that are unavailable in other routinely used population-level databases like insurance claims. For example, the Patient Health Questionnaire (PHQ)-9 is a disease severity metric in this population which may influence treatment choices and hence, outcomes. This study sought to describe the treatments, depression severity, and health resource utilization among this population prior to, during, and following a suicide-related event.
Methods. Adult patients enrolled in an integrated delivery network with a diagnosis code indicating MDD and without a diagnosis for bipolar or related disorders, dementia, intellectual disability, schizophrenia or other non-mood psychotic disorders between 10/31/2015 and 9/30/2019 were selected from the Optum de-identified EHR database. Only patients with a diagnosis code for SI or probable SA (SI/SA) between 10/31/2016 and 9/3/2019 and healthcare activity ≥12 months prior to their 1st observed SI/SA diagnosis were included. MDD-related treatments and PHQ-9 scores (obtained from physician notes using natural language processing) were described during 3 periods: the 1st SI/SA health care encounter (index period), 12 months before (pre-period), and 6 months after (follow-up period). For those with multiple PHQ-9 scores during a period, the latest one was used. All-cause and MDD-related healthcare utilization were assessed during follow-up period.
Results. A total of 71,161 patients with MDD and SI/SA were included in the analysis; mean (SD) age was 39 years (16 years); 55% were female. Antidepressants were prescribed for 31.3% during the pre-period and 41.2% during the index period. The use of psychotherapy was 9.5% during the pre-period and 18.7% during the index period. In the subgroup with data at 6 months (N=40,261), 43.4% and 20.5% received an antidepressant prescription and psychotherapy, respectively. During follow-up, the percent with ≥1 all-cause (MDD-related) hospitalization, observation stay and ED visit were: 11.8% (7.0%), 5.0% (2.1%), and 33.1% (11.1%). More than half (61.0) had ≥1 outpatient visit, and about 1/3 (33.4%) had ≥1 MDD-related outpatient visit. Very few patients had PHQ-9 scores recorded: pre-period 4.4% (mean [SD] 13.0 [7.5]); index period 1.3% (mean [SD] 17.0 [7.2]); and follow-up period 7.6% (mean [SD] 12.1 [7.5]).
Conclusions. This study documents a high level of health care resource utilization among those with MDD and suicidal thoughts and behaviors. Only a small proportion had documented PHQ-9 scores. Given that sizable proportions did not receive any antidepressant therapy or psychotherapy, even after suicidality was noted in their medical record, continued efforts in screening and treatment intensification are warranted for this vulnerable population.
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Baseline Characteristics and Current Standard of Care (SOC) Among US Veterans with Major Depressive Disorder (MDD)

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Abstract

Study Objectives. To describe characteristics of veterans with MDD and the different treatment regimens received during the first observed and treated major depressive episode (MDE).
Methods. A retrospective study was performed using the Veterans Health Administration (VHA) database from 4/1/2015 to 2/28/2019 (study period), supplemented with Medicare Part A/B/D data from 4/1/2015 to 12/31/2017. Adult veterans with ≥1 MDD diagnosis in the VHA database between 10/1/2015 and 2/28/2017 (index date) were included if they received ≥1 line of therapy (LOT) within a complete MDE. An MDE was considered as starting on the date of the first observed MDD diagnosis preceded by ≥6 months depression-free period (i.e. a period without an MDD diagnosis or antidepressant (AD) use); an MDE was considered as ended on the date of the last MDD diagnosis or the end of the medication supply of the last AD/augmentation medication, whichever came last and then followed by ≥6 months depression-free period. An MDE was required to begin and end during the study period. A LOT was defined as ≥1 AD at adequate dose and duration (≥6 weeks of continuous therapy with no gaps longer than 14 days) with or without an augmenting medication. Patients were required to have VA benefit enrollment for ≥6 months before (baseline) and ≥24 months after index (follow-up). Patient baseline demographic and clinical characteristics as well as the number and type of LOTs (up to the first six LOTs) received during the first observed and treated MDE were evaluated.
Results. Overall, 40,240 veterans with MDD were identified (mean ± standard deviation [SD] age: 50.9±16.3 years).The majority were male (83.9%), White (63.4%), and non-Hispanic (88.6%); 60.1% were unemployed or retired at some point during the study period. The most commonly observed baseline comorbidities included hypertension (27.5%), hyperlipidemia (20.8%),

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post-traumatic stress disorder (17.5%), and diabetes (14.8%). During the first observed and treated MDE (mean ± SD duration: 14.7 ± 8.6 months), patients received a mean of 1.6±1.0 LOTs, with 36.5% and 14.6% of patients receiving ≥2 and ≥3 LOTs, respectively; 0.8% of patients received ≥6 LOTs. The most commonly observed therapies were SSRI monotherapy (58.9%) followed by SNRI monotherapy (8.8%) in LOT1; SSRI monotherapy followed by AD augmented with anticonvulsants in LOT2 (SSRI monotherapy: 48.7%; AD augmentation with anticonvulsants:12.1%) and LOT3 (SSRI monotherapy: 43.5%; AD augmentation with anticonvulsants:15.0%).
Conclusions. This study used an episodic approach to evaluate the current standard of care among veterans with MDD. During the first observed and treated MDE, about one in seven veterans received ≥3 LOTs, suggesting presence of treatment-resistant MDD. Monotherapy with SSRIs or SNRIs and combination therapies of AD with anticonvulsants were the most common therapies in the first three LOTs.
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Ornithine Transcarbamylase Deficiency Presenting with Symptoms of Mania in a Young Adult Male

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Abstract

Study Objective. The purpose of this case study is to review the clinical presentation and medical workup of a young adult male presenting with acute behavior changes in the setting of undiagnosed ornithine transcarbamylase deficiency (OTCD)
Method. This case study involves a 19-year-old male with a psychiatric history of depression and one previous suicide attempt, who presented to a large midwestern university hospital emergency department after being found by police naked in a neighbor's yard. He displayed manic signs and symptoms, including euphoria, lack of sleep for five days, and attempting to purchase a new car and three large screen TVs. Family reported the patient uncharacteristically announced three weeks earlier that he was vegetarian and stopped eating his frequent customary cheeseburgers. Due to increased anxiety and inability to sleep, the patient received lorazepam 2 mg in the emergency department. Upon transfer to the psychiatric unit, therapy was initiated with aripiprazole 5 mg daily and valproate 1000 mg nightly on Day 1 of treatment. The patient refused medications on hospital Day 2, then received this combination again on Day 3. The next morning, the patient complained of lethargy, headache, nausea, and vomiting.
Results. The patient's ammonia level was found to be 204 micromol/L with ALT and AST of 714 and 647 IU/L respectively. Tests for infectious hepatitis were negative. Medical consultation recommended discontinuation of current medications, vigorous hydration, and further work up. On further investigation, the patient was found to have low plasma citrulline level of 8 micromol/L, undetectable plasma arginine, and high urinary orotic acid. The laboratory data showed a biochemical phenotype consistent with a diagnosis of partial OTCD, an X-linked urea cycle disorder resulting in toxic hyperammonemia. The patient was treated with a low protein diet modification as well as a combination of sodium benzoate and sodium phenylbutyrate to reduce serum ammonia concentration. With treatment the patient's laboratory values normalized, and mental status improved.
Conclusions. In conclusion, partial ornithine transcarbamylase deficiency may manifest with psychiatric symptoms in early adulthood. In young patients with elevated ammonia and mental status change, OTCD is an important diagnosis to consider, as it is the most common inherited cause of hyperammonemia.

The Effectiveness of De-Escalation Techniques as Compared to Physical Restraint/Seclusion on Inpatient Psychiatric Units: A Quantitative Systematic Review

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Abstract

Background. Restraint and seclusion were considered a form of treatment but consistently has led to physical and mental injuries to staff and patients. De-escalation has been viewed as a safer option. Understanding which intervention yields decreased injuries, aggression and violence will guide policy and inform practice.
Objectives. To identify which intervention leads to decreased physical and psychological injury to patients and staff.
Methods. The frequency of physical injuries to patients and staff from aggressive patients; frequency of psychological injuries to patients and staff from violent, aggressive incidents; frequency of violence, agitation and aggression; competence of staff at managing aggression and violence were evaluated.
Results. Fourteen studies were included in this review. There are many forms of de-escalation. Studies where techniques were taught to staff, the intervention was effective in decreasing injury in approximately half the studies. De-escalation techniques taught to patients decreased injury in 100% of the studies included in this review.
Conclusion. Consensus on which intervention works best could not be reached, nor is there overwhelming evidence for a particular type of de-escalation better suited for decreasing aggression and violence. Caution should be exercised when choosing a de-escalation technique for implementation in institutions due to lack of regulating agencies that inform practice and standards. In

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