Effect of esketamine on PHQ-9 score, emergency department visits, and hospitalizations of patients with treatment resistant depression in a community hospital setting

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PURPOSE:Esketamine is a rapidly acting, intranasal antidepressant FDA approved for the treatment of treatment-resistant depression (TRD). TRD is characterized by the failure of two or more antidepressants with adequate dosing and duration of therapy. Use of esketamine has been shown to decrease TRD symptoms by at least 50% in more than 70% of patients. The purpose of this study was to investigate the impact of esketamine on clinical outcomes as quantified by Patient Health Questionnaire-9 (PHQ-9) scores throughout treatment.

METHODS:This study was a descriptive, retrospective chart review of patients with TRD treated with esketamine at Middlesex Health from April 1, 2022 to March 31, 2023. Any patient aged 18 or older referred to the Middlesex Health esketamine clinic based on the diagnosis of TRD and meeting all criteria of the Spravato Risk Evaluation Mitigation Strategy (REMS) program was included. Patients were excluded if they failed to comply with the REMS program, had a diagnosis of bipolar depression or active opioid use disorder, or were actively using medical marijuana. Patients were followed during the esketamine treatment period to monitor for the primary outcome of PHQ-9 score improvement. The primary endpoint of this study was PHQ-9 score at 1 week, 4 weeks, 8 weeks, and 16 weeks during treatment. Data that was collected included age, sex, race, PHQ-9 scores, dates of esketamine administration, dosage of esketamine administered, current medications, and dates of ED visits/admissions (if applicable).

RESULTS:A total of 32 patients with TRD received esketamine treatment at Middlesex Health between April 1, 2022 and March 31, 2023. Patient age ranged from 18-88 years with a median of 49 [IQR 42-60.5] and 23 of the patients were female (71.9%). 31 patients completed 4 weeks of treatment, 25 patients completed 8 weeks of treatment, and only 6 patients completed 16 weeks of treatment. One patient stopped treatment after 1 week. The median baseline PHQ-9 score was 17.5 [IQR 13-21]. After 1 week of treatment, the median PHQ-9 score decreased to 14 [IQR 8-18.75]. After weeks 4, 8, and 16 the median scores were 10 [IQR 7-15.5], 9 [IQR 5-12], and 4.5 [IQR 2-2], respectively. However, due to small sample size, no statistical analysis could be performed to determine the significance of these changes.

CONCLUSION:Esketamine may be an effective treatment option for patients with TRD, as indicated by decrease in PHQ-9 scores, but further research is required to determine its impact on other clinical outcomes.