

The Use of Ketamine for Post-Traumatic Stress Disorder

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Target conference: APNA 34th annual conference

Link to guidelines: <https://www.apna.org/i4a/pages/index.cfm?pageid=3306>

Abstract

Post-traumatic stress disorder (PTSD) is an often chronic psychiatric disorder associated with high levels of disability and comorbidity. Numerous evidence-based pharmacological and psychological treatments are available for the treatment of this condition, but these approaches fail to yield full response and long-term remission in many patients. Ketamine has been receiving increasing attention as a therapeutic modality in psychiatry, especially in the management of treatment-resistant depression. There is limited yet growing evidence to support the use of ketamine for PTSD as well. This review of the recent literature will present randomized controlled trials, open-label trials, case reports, and retrospective studies exploring the therapeutic potential of ketamine in the treatment of PTSD. Ketamine has been found to improve PTSD symptoms, as well as related symptoms and clinical outcomes, with limited side effects. Ketamine may have important clinical applications in the treatment of PTSD, but further research is needed to elucidate the long-term safety and efficacy of this emerging approach.



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Background

- Post-traumatic stress disorder (PTSD) is an often chronic psychiatric disorder associated with high levels of disability and comorbidity.
- SSRIs are approved for the treatment of PTSD, but a full remission of PTSD symptoms is often difficult to achieve. Off-label augmentation options have limited efficacy.
- Ketamine is increasingly discussed and used in the context of treatment-resistant major depressive disorder (MDD). Novel treatments are needed for PTSD, and ketamine may be a promising option.
- Management of PTSD and comorbid conditions is a routine part of daily practice for many nurse practitioners. Ketamine therapy is within the nurse practitioner scope of practice.

Objective

To explore the efficacy and safety of ketamine as a treatment for PTSD and related symptoms

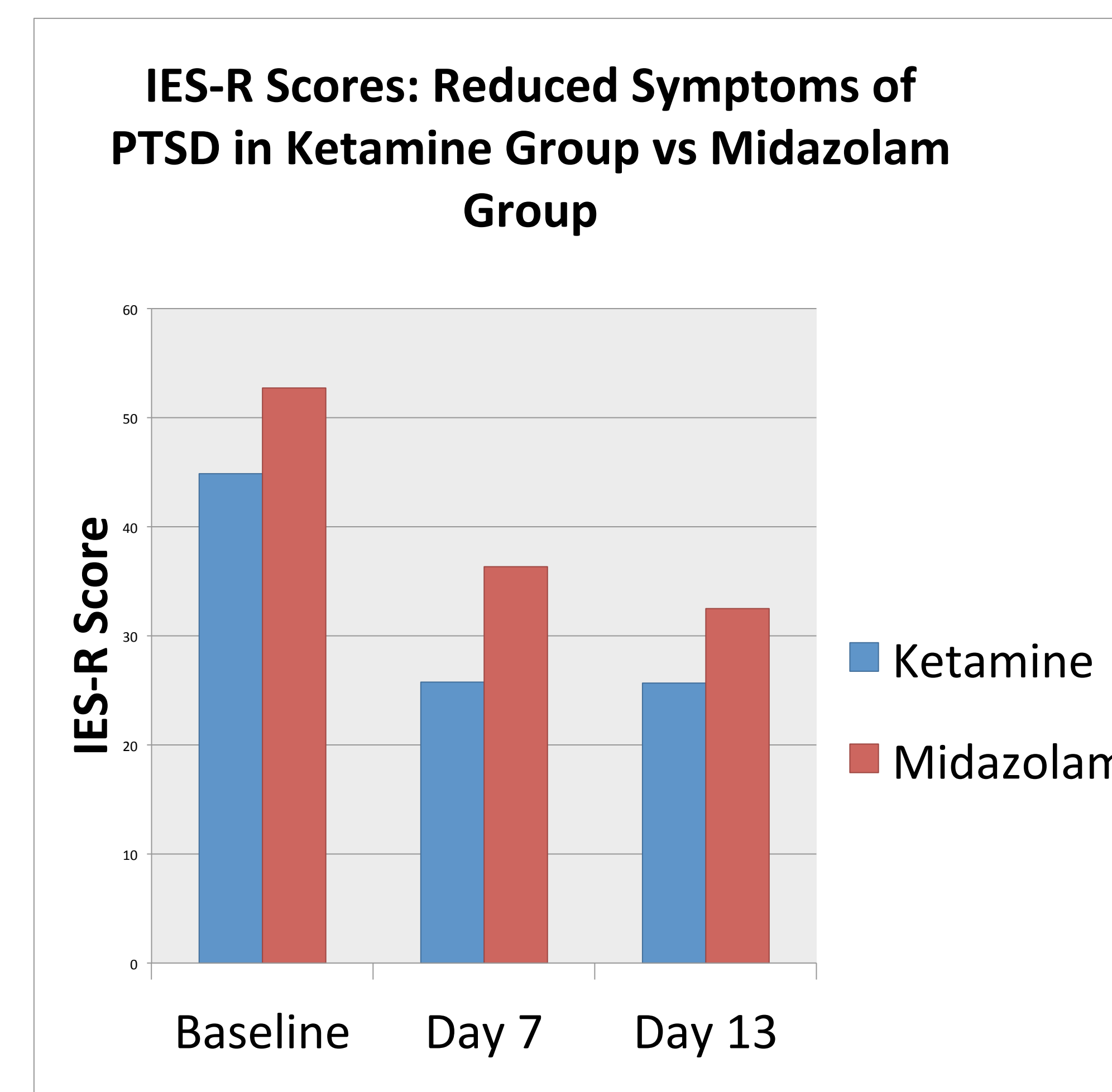
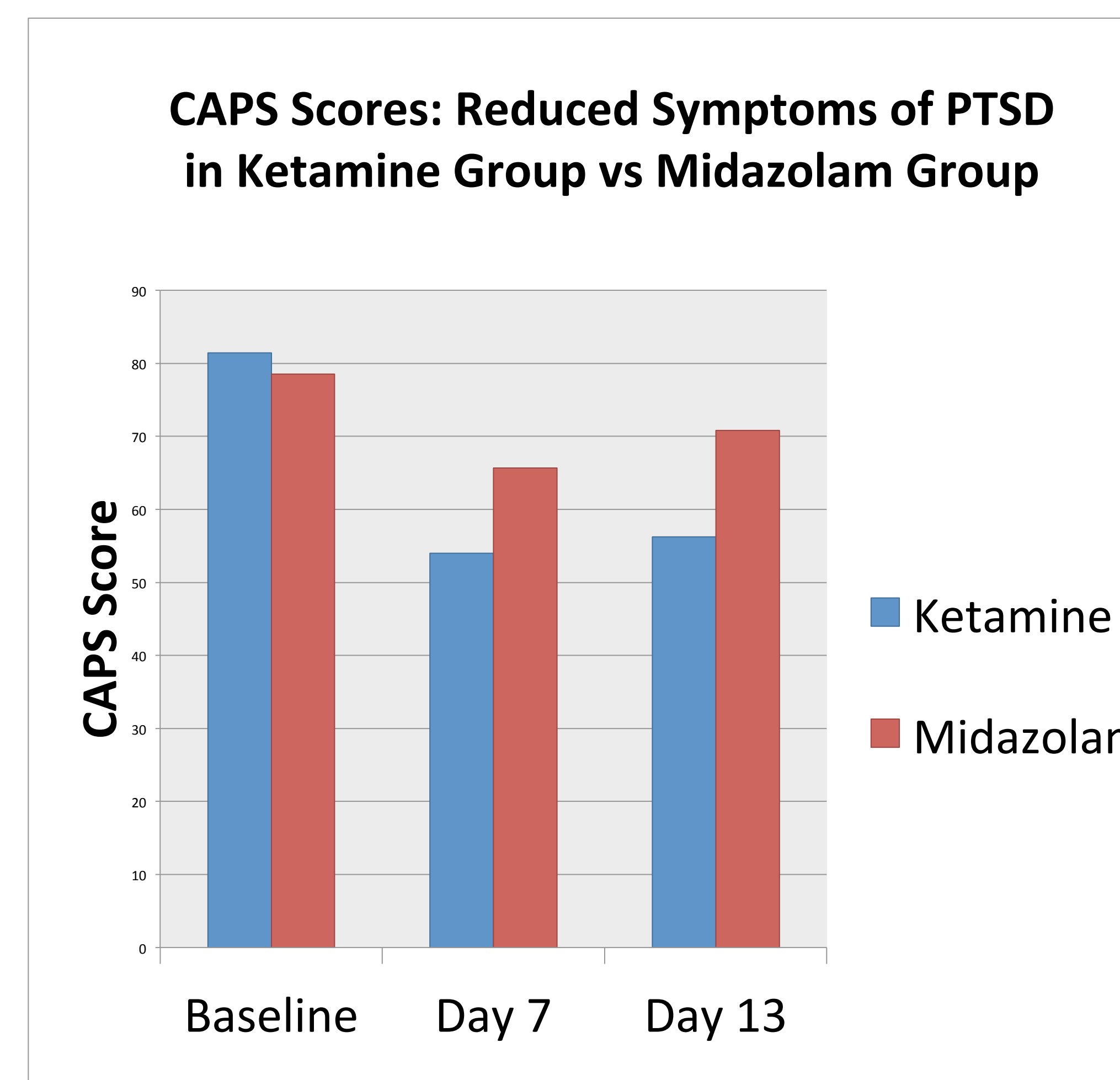
Methods

- **Databases searched:** PubMed, CINAHL, PsychINFO
- **Search terms:** PTSD, post-traumatic stress disorder, trauma, ketamine
- **Inclusion criteria:** RCT, open-label trials, case reports, retrospective studies, articles published in English in peer-reviewed journals between 2013 and 2019

Results

Author, Year	Study Design, Sample, Intervention	Outcomes
Albott, 2018	<ul style="list-style-type: none"> • Open-label trial • 15 adult patients with PTSD and treatment-resistant depression • 6 doses of IV ketamine (0.5 mg/kg) over 12 days 	<ul style="list-style-type: none"> • Significant improvements in PTSD remission and depression response • No major adverse events reported • Median time-to-relapse of 41 days
Hartberg et al., 2017	<ul style="list-style-type: none"> • Retrospective study • 37 adult patients with PTSD and treatment-resistant depression • 0.5 mg/kg sublingual ketamine, titrated up by 20-50% at each subsequent treatment 	<ul style="list-style-type: none"> • Significant reduction in number of psychiatric hospital admissions and length of stay • No major adverse events reported
Feder et al., 2014	<ul style="list-style-type: none"> • Double-blind RCT • 41 adult patients with chronic PTSD • Single dose of IV ketamine (0.5 mg/kg) vs. midazolam (0.045 mg/kg) 	<ul style="list-style-type: none"> • Significant reduction in PTSD symptoms • Remission lasted 7 days post-infusion • No major adverse events reported
Donohue et al., 2015	<ul style="list-style-type: none"> • Case report • 7-year-old patient with PTSD, DMDD, and reactive attachment disorder • 10 mg IV ketamine in the context of 2 procedures 	<ul style="list-style-type: none"> • Remission lasted 13 days after 1st procedure, 8 days after 2nd procedure • No side effects reported
D'Andrea & Sewell, 2013	<ul style="list-style-type: none"> • Case report • 1 adult patient with treatment-resistant PTSD • 35 mg (0.5 mg/kg) IV ketamine over 20 min 	<ul style="list-style-type: none"> • Remission lasted 15 days post-infusion • Only transient nystagmus and visual distortions reported
Womble, 2013	<ul style="list-style-type: none"> • Case report • 1 adult patient with treatment-resistant PTSD and MDD • 35 mg (0.5 mg/kg) IV ketamine over 20 min 	<ul style="list-style-type: none"> • Remission lasted 14 days post-infusion • Slight headache reported at infusion completion

Note. PTSD = post-traumatic stress disorder; MDD = major depressive disorder; DMDD = disruptive mood dysregulation disorder



Clinical Implications

- The available literature suggests that ketamine may be safe and effective for patients with PTSD.
- Ketamine infusion may represent a useful tool for nurse practitioners in treating PTSD. Ketamine may be particularly valuable in the treatment of comorbid PTSD and depression.
- More research is needed to elucidate the long-term safety and efficacy of ketamine.
- The evidence supporting this approach is growing, and it will be important for nurse practitioners to stay informed.

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