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Chronic Pain Abstracts

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Improving chronic pain assessment with the Discretized Analog Scale (DISCAN): a focus on polypharmacy and opioid use

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75

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INTRODUCTION

Chronic pain affects approximately 8 million Canadians, significantly reducing quality of life across physical, emotional, and social domains.[1] Patients often face comorbidities such as mental illness, cognitive impairment, and substance use disorder, alongside a substantial health care burden.[2] Accurate pain assessment is critical for guiding management and optimizing outcomes.[3] The Numerical Rating Scale (NRS) is widely used but simplifies pain to a single score, which can limit its sensitivity in complex cases, particularly for patients with polypharmacy or cognitive impairments.[4] The DISCretized ANalog Scale (DISCAN) offers an alternative, potentially capturing greater variation in pain intensity.[5] This study evaluates DISCAN's utility in chronic pain management by comparing it to the NRS, with a focus on predicting opioid use and understanding its relationship with polypharmacy. By identifying limitations of conventional tools, this study aims to enhance pain assessment and improve evidence-based chronic pain care practices.

METHODS

Participants were recruited from a chronic pain clinic and provided informed consent. Patients aged 40 yr and older were eligible. Pain intensity was assessed using the NRS and the DISCAN. The NRS uses a 0–10 scale, while DISCAN employs an ordinal format (a–n) for pain measurement. Both scales were administered pre-visit using an iPad-based REDCap® (Vanderbilt University, Nashville, TN, USA) questionnaire.

Medication data were retrieved from the provincial electronic health record system, HealthENL. Unique medications dispensed within a one-year window (6 months pre- and post-visit) were extracted, excluding renewals or vaccinations. Medications were categorized into anxiolytics/antidepressants, opioids, non-opioid pain relievers, neuropathic agents, and others. Polypharmacy levels were defined as low (≤ 10), moderate (11–19), and high (≥ 20 medications).

Descriptive statistics summarized demographic and clinical characteristics. Spearman's rho assessed correlations between pain scales and medication counts. Logistic regression evaluated the ability of DISCAN and NRS to predict opioid use and high polypharmacy levels, adjusting for age and sex. Statistical analyses were conducted in SPSS (IBM Corp, Armonk, NY,

USA) and R (R Foundation for Statistical Computing, Vienna, Austria), with significance set at $P < 0.05$.

RESULTS

One hundred and thirteen participants (mean age 59.25 yr, 71.7% female) completed the study. DISCAN scores were significantly correlated with NRS scores (Spearman's rho = 0.706; $P < 0.001$). Logistic regression revealed that DISCAN was a significant positive predictor of opioid use (OR, 1.933; $P < 0.001$), with each one-unit increase in DISCAN score associated with a 93.3% increase in the odds of opioid use. Conversely, NRS scores were inversely associated with opioid use (OR, 0.526; $P = 0.002$), with each one-unit increase linked to a 47.4% decrease in the odds of opioid use. Polypharmacy was observed in 72% of participants, with high polypharmacy (≥ 20 medications) present in 30.1%. Logistic regression indicated that DISCAN was a significant positive predictor of high polypharmacy (OR, 1.597; $P = 0.003$), while NRS scores were inversely associated (OR, 0.664; $P = 0.025$).

DISCUSSION

This study highlights DISCAN's potential to enhance chronic pain assessment, particularly in complex patients. The differing relationships between DISCAN and NRS with opioid prescribing may stem from DISCAN's multidimensional approach, which captures aspects of pain beyond intensity, making it more aligned with clinical decision-making. In contrast, the NRS's simplicity as a unidimensional scale may result in high scores that lack actionable detail, reducing its influence on prescribing. Clinicians may perceive DISCAN scores as more reliable and reflective of overall pain burden, while high NRS scores could be dismissed as overly subjective. These findings support integrating DISCAN into routine care.

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Prospective preference assessment for the Ecstasy for Alleviating Severe Chronic Neuropathic Pain (EASE-Pain) trial

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46

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INTRODUCTION

Emerging evidence suggests that 3,4-methylenedioxymethamphetamine (MDMA)-assisted psychotherapy may be a promising intervention for chronic pain.[1,2] Potential mechanisms include increased engagement in psychotherapy, influence on serotonin and dopamine neurotransmission, and improvements in functional connectivity in the brain, which may work to modulate pain processing and reduce pain interference.[3–5] We developed the Ecstasy for Alleviating SEvere chronic neuropathic Pain (EASE-Pain) trial, a trial comparing MDMA and an active placebo (methylphenidate) combined with psychotherapy for pain relief. Prior to implementation of the trial, we conducted a prospective preference assessment (PPA), aiming to 1) assess willingness to participate in the trial, 2) identify motivators and concerns to participation, 3) identify protocol improvements to enhance enrollment and acceptability, and 4) compare demographic and health characteristics between participants who were willing versus not willing to participate in the proposed trial.

METHODS

We recruited patients who were 18 yr or older with a diagnosis of chronic (≥ 3 months) moderate-to-severe neuropathic pain, during the period between July 2024 to August 2024. We had a target sample size of 50 participants, aligning with the typical range of participants enrolled in previously completed PPAs and the principles of theoretical saturation, in which

recruitment ends once no new insights emerge during interviews. Each participant completed four PPA phases: 1) read a description of the trial, 2) assessment of their comprehension of the trial, 3) open-ended questions exploring attitudes towards the trial, and 4) a self-administered questionnaire assessing patient demographics, health status, preferences and beliefs regarding the study drugs. We analyzed qualitative data using thematic analysis and quantitative data using t-tests for continuous variables and Fisher's Exact Test for categorical variables.

RESULTS

We enrolled 42 patients in the study, with 76% willing to participate in the proposed EASE-Pain trial. The mean age of participants was 61.9 yr, and 57% of the participants were female. Participants of European/White background were more likely to be willing than not willing to participate in the proposed trial (78% *vs* 40%; $P = 0.0007$). Other factors that may increase likelihood of participation included: older age, having a bachelor's degree or higher, and past psychedelic and/or MDMA use. Motivating factors for participation in the proposed trial included potential pain relief (62%), seeking alternatives to current ineffective treatments (26%), and improved quality of life (14%). Common concerns included side effects (24%), potential impact on pre-existing medications or comorbidities (19%), stigma regarding MDMA (14%), and concerns about potential dependency to the study drugs (12%).

DISCUSSION

The study findings indicate a strong willingness among chronic pain patients to participate in the EASE-Pain trial. This suggests a high level of acceptability for the proposed trial and high likelihood that recruitment and enrollment for a pilot trial would be successful. Primary concerns included side effects, impacts on pre-existing medications and comorbidities, stigma, and dependency. In response, protocol modifications, such as improved patient education about the study drugs and the trial's safety protocols, will be implemented in the pilot trial.

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The use of ketamine for chronic pain management: a qualitative study exploring patient perspectives

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INTRODUCTION

Chronic pain affects approximately 8 million Canadians a year.[1] Chronic neuropathic pain, a subset of chronic pain, is defined as dysregulation of the somatosensory nervous system leading to pain.[2] Chronic pain has significant physical, social, functional, and economic impacts, such as increased rates of medical co-morbidities, poorer quality of life, limited mobility, and notable economic impacts on both the individual and the health care system.[1,3] Ketamine is an anesthetic drug with various uses and has been used in the treatment of chronic neuropathic pain, with evidence of short term-pain relief.[4] To better understand ketamine's efficacy, durability, and accessibility, it is important to gain an appreciation of patient's experiences with ketamine for chronic pain. Therefore, this study aims to understand barriers and facilitators patients face when accessing ketamine for chronic pain treatment. Our aim is to improve access to treatments, specifically ketamine, and increase pain management for individuals living with chronic pain.

METHODS

This study followed a qualitative descriptive design. This approach was chosen as it helps to better understand the subjective nature of individual's experiences with chronic pain. We recruited participants from a chronic pain ketamine infusion program at a tertiary care hospital. 13 participants who met the inclusion criteria were included in the study. Participants first completed a survey which was designed to collect demographic information, along with

baseline chronic pain characteristics. A semi-structured interview was then conducted, which allowed us to collect open-ended data and delve deeply into patient experiences. Survey data were deidentified and uploaded to a secure, hospital encrypted computer, and results tables were created to display the data. Interviews were transcribed by the lead author and uploaded to NVivo (QSR International, Burlington, MA, USA). An initial coding framework was developed, and the framework was used to code data from the transcripts. Once coding was completed, major themes were identified and consolidated.

RESULTS

Our results are divided into three categories: 1) the impact of ketamine on pain; 2) barriers to chronic pain treatment, including ketamine; and 3) facilitators to accessing ketamine for chronic pain. The entire study population reported that after receiving ketamine treatment, they experienced decreased pain. Many participants described that ketamine not only relieved pain, but also helped reestablish a sense of self, leading to increased functionality and quality of life. Barriers to ketamine treatment included fragmented health systems and prolonged wait times, leading to inadequate pain management, prolonged infusion intervals due to lack of health care resources, and difficulties being believed about the nature and intensity of their pain, which had profound physical and psychological impacts on participants. Lastly, facilitators included providing a comfortable and supportive environment which increased psychological safety, support from individual health care providers, and geographical factors, such as proximity to centres which offer chronic pain treatments.

DISCUSSION

Participants noted that ketamine decreased pain and improved quality of life. However, there remain significant systemic and personal barriers to accessing ketamine for chronic pain. Ketamine is often stigmatized, and strategies to decrease stigma such as continued education for health care providers and the public can help.[5] Providing private treatment areas, similar to our ketamine infusion program, can improve psychological safety. Further patient-centred research is needed to determine what an 'ideal' ketamine infusion interval is. Overall, by identifying patient experiences with ketamine for chronic pain, we hope to improve access to pain management and facilitate future research in this field.

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Unequal access: geographic and racial disparities in chronic pain clinical trial accessibility across the USA

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INTRODUCTION

Chronic pain affects over 20% of US adults and is a leading cause of disability, with significant disparities in access to effective management disproportionately affecting racial minorities, rural residents, and underserved populations.[1,2] Clinical trials play a crucial role in advancing evidence-based treatments for chronic pain, yet barriers to participation risk excluding marginalized groups from these advancements. To better understand potential inequities, we evaluated geographic accessibility to chronic pain clinical trials across the USA.

METHODS

We obtained clinical trial data from the ClinicalTrials.gov Application Programming Interface (API) using a comprehensive keyword search strategy related to chronic pain. The search terms were carefully selected to cover a wide range of chronic pain types, and specific pain syndromes, including terms from the ICD-11 classification to ensure broad and relevant coverage. Geospatial coordinates (latitude and longitude) for the clinical trial locations and population centres were generated from their ZIP codes using the Google Maps Geocoding API. Population data was obtained through the American Community Survey (ACS) US Census API. Distances between each US census ZIP code and the nearest chronic pain trial location were calculated using the Haversine formula. The average distance to clinical trials was calculated as a population-weighted mean, ensuring greater representation of areas with higher populations. Each US census ZIP code included a population count categorized by race, enabling an assessment of distance to the nearest trial by racial demographic. Trends in the number of trials over time and changes in geographic accessibility were assessed using linear regression analysis.

RESULTS

From 2007 to 2024, 5,262 chronic pain trials were identified across 1,304 ZIP codes, averaging 4.0 trials hosted per zip code. Linear regression analysis revealed a significant increase in the

number of trials over time (slope = 13.9 trials/year; $P < 0.001$) and a concurrent decrease in the average distance to the nearest trial site (slope = -1.9 miles/year; $P < 0.001$). However, disparities in geographic accessibility persisted. American Indian populations faced the greatest average distance to the nearest trial at 37.1 miles (95% confidence interval [CI], 36.4 to 37.9), compared to approximately 17.0 miles for White populations (95% CI, 16.7 to 17.3), 10.6 miles for Black populations (95% CI, 10.3 to 10.8), and 6.0 miles for Asian populations (95% CI, 5.8 to 6.2).

DISCUSSION

While the rise in chronic pain trials and shorter average distance to trial sites reflect progress, racial disparities persist. American Indian populations face the greatest geographic barriers, likely due to their high concentration in rural areas compared to other populations,[3] where trial sites are scarce. Proximity is not the only key factor in ensuring participation; despite shorter distances, Black populations face reduced accessibility to clinical trials due to systemic barriers, such as mistrust and socioeconomic challenges.[4] Addressing these inequities requires expanding trial sites in underserved areas, adopting decentralized models,[5] and fostering trust through community engagement to ensure equitable access.

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