

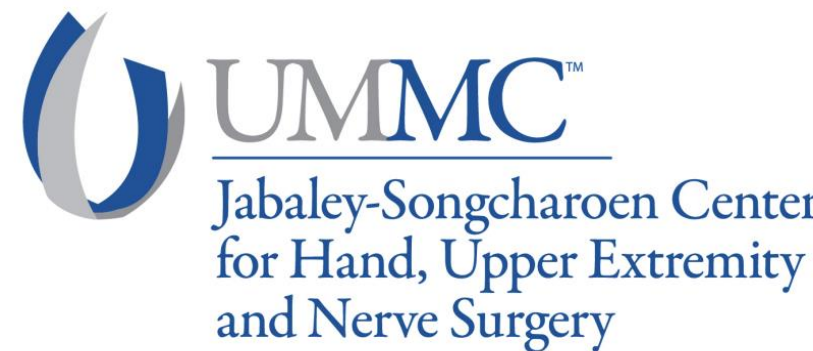


Hand Infection Encounters in the Emergency Department in the Presence of Concomitant Psychiatric Diagnoses: A Nationwide Cosmos Study

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INTRODUCTION

Hand infections make up a significant proportion of patients evaluated by the hand surgeon in the emergency department. There are multiple comorbidities that increase a patient’s risk of developing a hand infection including diabetes mellitus, immunosuppression, and intravenous drug use. Despite this, there is a paucity of literature on the impact comorbid psychiatric diagnoses have on the rates of patient presentation to the emergency department for management of a hand infection. The goal of this study was to evaluate rates of patient presentation for hand infection in the presence of a comorbid psychiatric diagnosis and compare this to the general population.

METHODS

We performed a retrospective case - control study based on data from Cosmos, a nationwide Epic® electronic health record database. All emergency room encounters related to hand infections over a three-year period from 2020-2023 were evaluated for the presence of a comorbid psychiatric diagnosis within the patient’s problem list. The rates of hand infection among the control population were then compared to rates in patients with a documented psychiatric diagnosis. Statistical analysis was performed using GraphPad Prism version 10.0.0 with a significant p-value set at 0.05 and 95% confidence intervals for odds ratios calculated using the Woolf logit method.



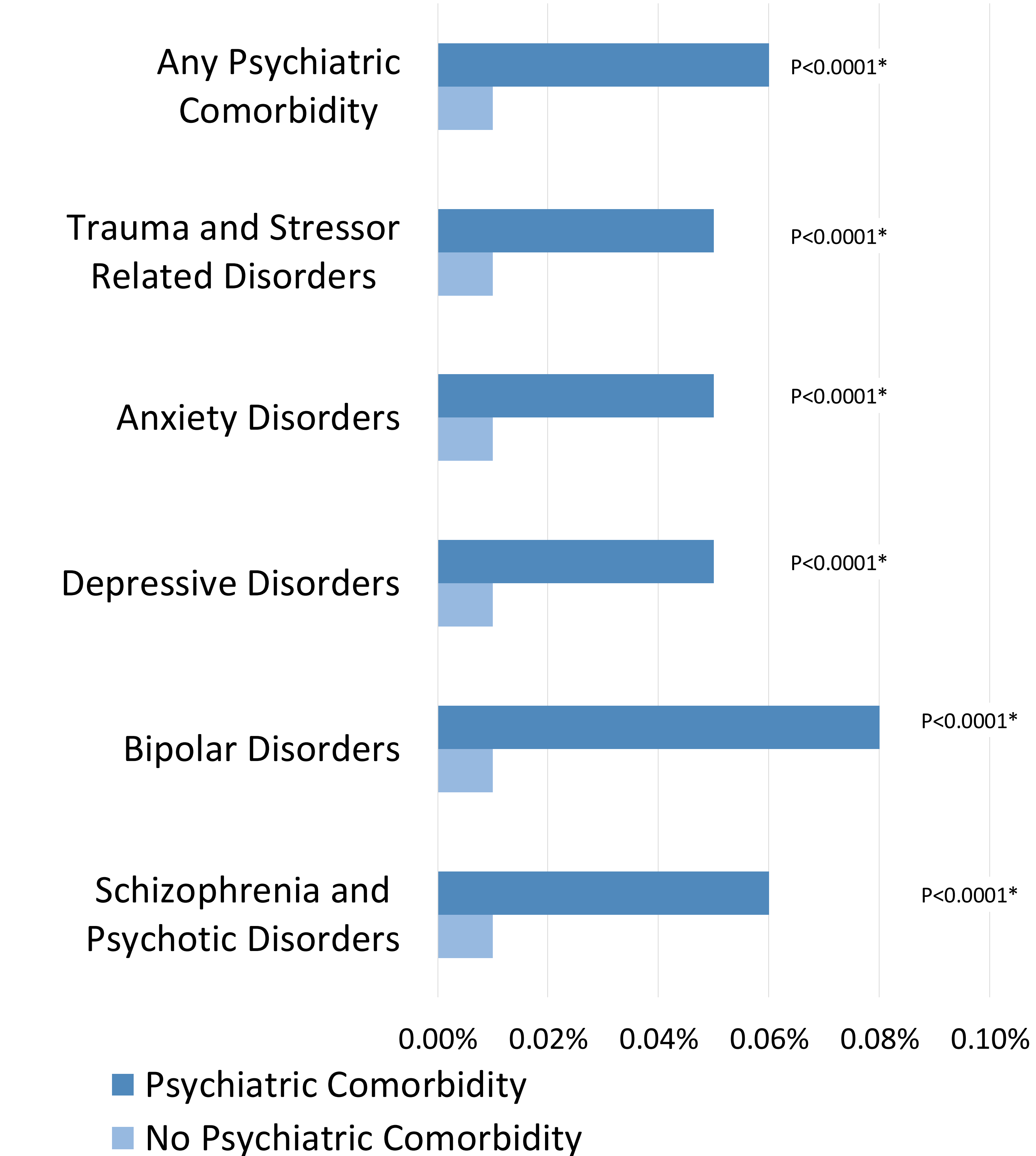
DATA ANALYSIS

Data analysis included 94,210,226 unique encounters representing 42,786,312 individual patients. Categories of diagnoses from the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) included:

- Schizophrenia and Psychotic Disorders
- Bipolar Disorders
- Depressive Disorders
- Anxiety Disorders
- Trauma and Stressor-Related Disorders

RESULTS

When evaluating subgroups of psychiatric diseases based on the DSM-5 criteria, the rate of presentation for hand infection remained significantly higher for patients with schizophrenia and psychotic disorders (0.06% versus 0.01%, p<0.0001), bipolar disorder (0.8% versus 0.01%, p<0.0001), depressive disorders (0.05% versus 0.01%, p<0.0001), anxiety disorders (0.05% versus 0.01%, p<0.0001), and trauma and stressor - related disorders (0.05% versus 0.01%, p<0.0001).



Diagnosis	Rate of Hand Infection Presentation P-value Comparison to Patients without Psychiatric Comorbidity
No Psychiatric Co-Morbidity	0.01%
Schizophrenia and Psychotic Disorders	0.06% p<0.0001*
Bipolar Disorders	0.08% p<0.0001*
Depressive Disorders	0.05% p<0.0001*
Anxiety Disorders	0.05% p<0.0001*
Trauma and Stressor Related Disorders	0.05% p<0.0001*
Any Psychiatric Co-Morbidity	0.06% p<0.0001*

CONCLUSION

The rate of presentation for hand infections to the emergency department in this study was significantly higher in patients with a comorbid psychiatric diagnosis. An understanding of risk factors for the development of hand infections can help guide the practitioner in appropriate assessment and management of this complex problem.