

Prevalence and risk factors for psychological burden in COVID-19 patients and their relatives: A prospective observational cohort study

Katharina Beck^{1*}, Alessia Vincent^{1,2*}, Christoph Becker^{1,3*}, Annalena Keller¹, Hasret Cam¹, Rainer Schaefer^{1,4,5}, Thomas Reinhardt⁶, Raoul Sutter^{5,7,8}, Kai Tisljar⁷, Stefano Bassetti^{5,9}, Philipp Schuetz^{5,10}, Sabina Hunziker^{1,4,5*}

¹Medical Communication and Psychosomatic Medicine, University Hospital Basel; ²Division of Clinical Psychology and Psychotherapy, Faculty of Psychology, University of Basel; ³Emergency Department, University Hospital Basel; ⁴Psychosomatic Medicine, University Hospital Basel; ⁵Medical Faculty of the University of Basel; ⁶Human Resources & Leadership Development, University Hospital Basel; ⁷Intensive Care Unit, University Hospital Basel; ⁸Department of Clinical Research, University Hospital Basel; ⁹Division of Internal Medicine, University Hospital Basel; ¹⁰Department of Internal Medicine, Kantonsspital Aarau

Katharina Beck, Alessia Vincent, Christoph Becker
Universitätsspital Basel
Medizinische Kommunikation
Klingelbergstrasse 23
CH-4031 Basel
juliakatharina.beck@usb.ch

*These authors contributed equally to this work.

Introduction

Due to the dramatic measures accompanying isolation and the general uncertainty and fear associated with COVID-19, patients and relatives may be at high risk for adverse psychological outcomes. Until now there has been little research focusing on the prevalence and risk factors for psychological distress in COVID-19 patients and their relatives. The objective of our study was to prospectively assess psychological distress in COVID-19 patients and their relatives 30 days after hospital discharge.

Methods

In this prospective observational cohort study at two Swiss tertiary-care hospitals, we included consecutive adult patients hospitalized between March and June 2020 for a proven COVID-19 and their relatives. The primary outcome was psychological distress, defined as symptoms of anxiety and/or depression measured with the Hospital Anxiety and Depression Scale (HADS). A score of ≥ 8 on the depression and/or anxiety subscale was defined as psychological distress. The main secondary endpoint was symptoms of post-traumatic stress disorder (PTSD), defined as a score of ≥ 1.5 on the Impact of Event Scale-Revised (IES-R).

Results

Among 126 included patients, 24 (19.1%) had psychological distress and 10 (9.5%) had symptoms of PTSD 30 days after hospital discharge. In multivariable logistic regression analyses, three factors were independently associated with psychological distress in patients: lower resilience (OR 0.82, 95%CI 0.71 to 0.94, $p=0.005$), higher levels of perceived stress (OR 1.21, 95%CI 1.06 to 1.38, $p=0.006$) and low frequency of contact with relatives (OR 7.67, 95%CI 1.42 to 41.58, $p=0.018$). The model showed good discrimination with an area under the receiver-operating characteristic curve (AUC) of 0.92. Among 153 relatives, 35 (22.9%) showed symptoms of psychological distress, and three (2%) of PTSD. For relatives, resilience was also an independent protective factor (OR 0.85, 95%CI 0.75 to 0.96, $p=0.007$), whereas perceived overall burden caused by COVID-19 was an independent risk factor for psychological distress (OR 1.72, 95%CI 1.31 to 2.25, $p<0.001$). The overall model also had good discrimination, with an AUC of 0.87.

Conclusion

A relevant number of COVID-19 patients as well as their relatives exhibited psychological distress 30 days after hospital discharge. These results might aid in development of strategies to prevent psychological distress in COVID-19 patients and their relatives.