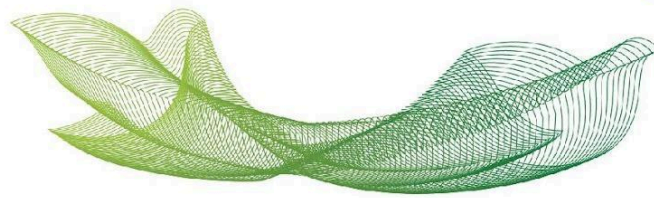


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Título	Demographic and Clinical Profile of Patients with Osteogenesis Imperfecta Hospitalized Due to Coronavirus Disease (COVID)-19: A Case Series of 13 Patients from Brazil
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Resumo	<p>Background: Osteogenesis imperfecta (OI) is a rare genetic connective tissue disorder characterized by bone fragility, most often caused by pathogenic variants in type I collagen genes. In this context, we aimed to describe the clinical and epidemiological characteristics of patients with OI who were hospitalized for coronavirus disease (COVID)-19 in Brazil between 2020 and 2024. Methods: We conducted a retrospective descriptive analysis using data from the Brazilian Unified Health System (SUS, which stands for the Portuguese Sistema Único de Saúde) through the Open-Data-SUS platform. Patients with a confirmed diagnosis of OI and hospitalization due to COVID-19 were included. Descriptive statistical analysis was performed to evaluate demographic, clinical, and outcome-related variables. We included all hospitalized COVID-19 cases with a confirmed diagnosis of OI between 2020 and 2024. Results: Thirteen hospitalized patients with OI and COVID-19 were identified. Most were adults (9; 69.2%), male (7; 53.8%), self-identified as White (9; 69.2%), and all were residents of urban areas (13; 100.0%). The most frequent symptoms were fever (10; 76.9%), cough (9; 69.2%), oxygen desaturation (9; 69.2%), dyspnea (8; 61.5%), and respiratory distress (7; 53.8%). Two patients had heart disease, one had chronic lung disease, and one was obese. As for vaccination status, five patients (38.5%) had been vaccinated against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Four patients (30.8%) required admission to an intensive care unit (ICU), and six (46.2%) required noninvasive ventilatory support. Among those admitted to the ICU, only two required invasive mechanical ventilation. The clinical outcome was death in two cases (15.4%). Both patients were male, White, and had not been vaccinated against SARS-CoV-2. One was 47 years old, was not admitted to the ICU, but required noninvasive ventilation. Despite the underlying condition most patients had favorable outcomes, consistent with an</p>



international report. Conclusions: This is the first report to describe the clinical and epidemiological profile of patients with OI hospitalized for COVID-19 in Brazil, providing initial insights into how a rare bone disorder intersects with an acute respiratory infection. The generally favorable outcomes observed-despite the underlying skeletal fragility-suggest that individuals with OI are not necessarily at disproportionate risk of severe COVID-19, particularly when appropriately monitored. The occurrence of deaths only among unvaccinated patients underscores the critical role of SARS-CoV-2 vaccination in this population. Although pharmacological treatment data were unavailable, the potential protective effects of bisphosphonates and vitamin D merit further exploration. These findings support the need for early preventive strategies, systematic vaccination efforts, and dedicated clinical protocols for rare disease populations during infectious disease outbreaks.

Fomento

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