patients diagnosed with HAIs before and after the onset of the COVID-19 pandemic.

Methods: A retrospective study conducted through analysis of data from a tertiary hospital, collected between 2016 and 2023, including information on HAI diagnoses and antimicrobial susceptibility profiles.

Results: A total of 185 patients with HAIs caused by *P. aeruginosa* were reported during the study period, 42 before the onset of the pandemic and 143 after. There was a higher occurrence of respiratory tract HAIs caused by *P. aeruginosa* compared with other sites after the onset of the pandemic, with statistically significant difference (38.1% vs. 59.4%, $p = 0.015$). The most relevant antibiotics for the treatment of *P. aeruginosa* infections were selected and susceptibility profiles were analyzed, classified as resistant and non-resistant: meropenem, amikacin, piperacillin–tazobactam, cefepime, and ceftazidime. When analyzing strains resistant to meropenem with a minimum inhibitory concentration (MIC) ≥ 32, a value indicating high resistance to the antibiotic, a statistically significant difference was observed between the two periods, with an increase in the number of strains with MIC ≥ 32 in the post-pandemic period (10.5% vs. 43.7%, $p = 0.01$). Regarding resistance to cefepime, comparison between the two periods also showed a statistically significant difference, with an increase in resistant strains in the post-pandemic period (16.6% vs. 37.6%, $p = 0.02$).

Conclusion: Changes in the HAI profile of the service were observed after the onset of the COVID-19 pandemic, with an increase in respiratory infections caused by *P. aeruginosa*, as well as an increase in strains resistant to cefepime and strains with high resistance to meropenem.

Keywords: *Pseudomonas aeruginosa*, HAIs, COVID-19, Bacterial Resistance.

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IMPACT OF EMERGENCY ACTIONS ON REDUCING THE INCIDENCE DENSITY OF PRIMARY BLOODSTREAM INFECTION ASSOCIATED WITH CENTRAL VENOUS CATHETER IN AN ONCOLOGICAL INTENSIVE CARE UNIT

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Introduction/Objectives: Primary bloodstream infections associated with central venous catheters (CLABSI) represent serious adverse events in oncology patients hospitalized in intensive care units (ICUs), contributing to increased morbidity, length of stay, and hospital costs. In June 2024, a marked increase in the incidence density (ID) of CLABSI was identified in a 34-bed oncological ICU. The objective of this study was to describe the extraordinary actions adopted and to evaluate their impact on reducing the infection rate.

Methods: A quasi-experimental study with retrospective analysis, conducted in a public quaternary oncology hospital. The intervention occurred between July and September 2024. Initially, a root cause analysis was conducted using the Ishikawa diagram. Subsequently, corrective measures were defined using the 5W2H tool and included: in-person training on catheter insertion and maintenance, daily bedside audits using checklists, intensified active surveillance, implementation of the central venous catheter maintenance bundle in the electronic medical record, technovigilance of vascular access devices, and feedback of indicators with a shared action plan. Intervention effectiveness was assessed by comparing the CLABSI incidence density (number of infections per 1,000 catheter-days) before and after the intervention, using a chi-square test for two Poisson rates. Statistical significance was considered at $p < 0.05$.

Results: The CLABSI ID in June 2024 reached 10.8, a value well above the 2023 annual average (3.8). After the intervention, a progressive decline in incidence density was observed: July (5.8), August (5.5), and September (0.0) infections per 1,000 catheter-days ($p = 0.005$). Care audits demonstrated greater adherence to recommended practices, with immediate correction of nonconformities. The multidisciplinary approach fostered team engagement and contributed to the sustainability of the implemented actions.

Conclusion: The adoption of structured interventions based on root cause analysis and multidisciplinary strategies significantly reduced the ID of CLABSI in an oncological ICU. The sustained decline, together with improved adherence to safe practices, demonstrates the positive impact of educational actions, systematic audits, and proactive risk management. The results reinforce the importance of continuous surveillance and engagement of healthcare teams in infection prevention.

Keywords: Catheter-Related Infections, Bloodstream Infection, Infection Control, Intensive Care Unit, Oncology.

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IMPACT ON ADHERENCE TO THE CONCURRENT CLEANING PROTOCOL IN AN ADULT INTENSIVE CARE UNIT OF A TERTIARY UNIVERSITY HOSPITAL AFTER A MULTIMODAL INTERVENTION

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