

Impact of the COVID-19 Pandemic on Incidence and Epidemiology of Catheter-Related Bloodstream Infection 2 years later

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INTRODUCTION

- The **COVID-19** pandemic increased **catheter-related bloodstream infections (C-RBSI)**, but its subsequent **impact** has not been adequately described.
- Our hospital has already depicted the effects of the COVID-19 pandemic in the first wave, but we still do not know whether C-RBSI rates and aetiology are similar to those described before the COVID-19 pandemic.
- Therefore, we aimed to evaluate the **impact** of the COVID-19 pandemic on the evolution of C-RBSI in a large tertiary teaching hospital two years later.

MATERIAL AND METHODS

- **Retrospective** cohort study comparing the incidence, aetiology, catheter type and where C-RBSI episodes occurred from 2018 to 2022.
- We analyzed and compared **pre-COVID** (2018- mid 2020) and **post-COVID** (mid-2020- 2022) periods.

RESULTS

- During the study period, we collected **556** C-RBSI episodes.
- C-RBSI **incidence** rate per 1,000 admissions each year was as follows: 2018: 2.2; 2019: 1.7; 2020: 3.29; 2021: 2.92; and 2022: 2.69. (**Figure 1**).
- The distribution of **type of catheters** are detailed in **Figure 2**.
- C-RBSI episodes occurring in **critical care units** each year were, respectively: 2018: 57 (54.8%), 2019: 38 (45.2%), 2020: 89 (63.6%), 2021: 69 (60.5%), and 2022: 58 (50.9%).
- The distribution of **microorganisms** showed an increase in Gram-negative episodes after the pandemic (**Figure 3**).

CONCLUSIONS

- Our study shows an increase in the incidence rate of C-RBSI after the COVID-19 pandemic.
- C-RBSI episodes were mainly caused by coagulase-negative Staphylococci but with a rise in Gram-negative bacilli.

Figure 1. Incidence rate of C-RBSI per 1,000 admissions

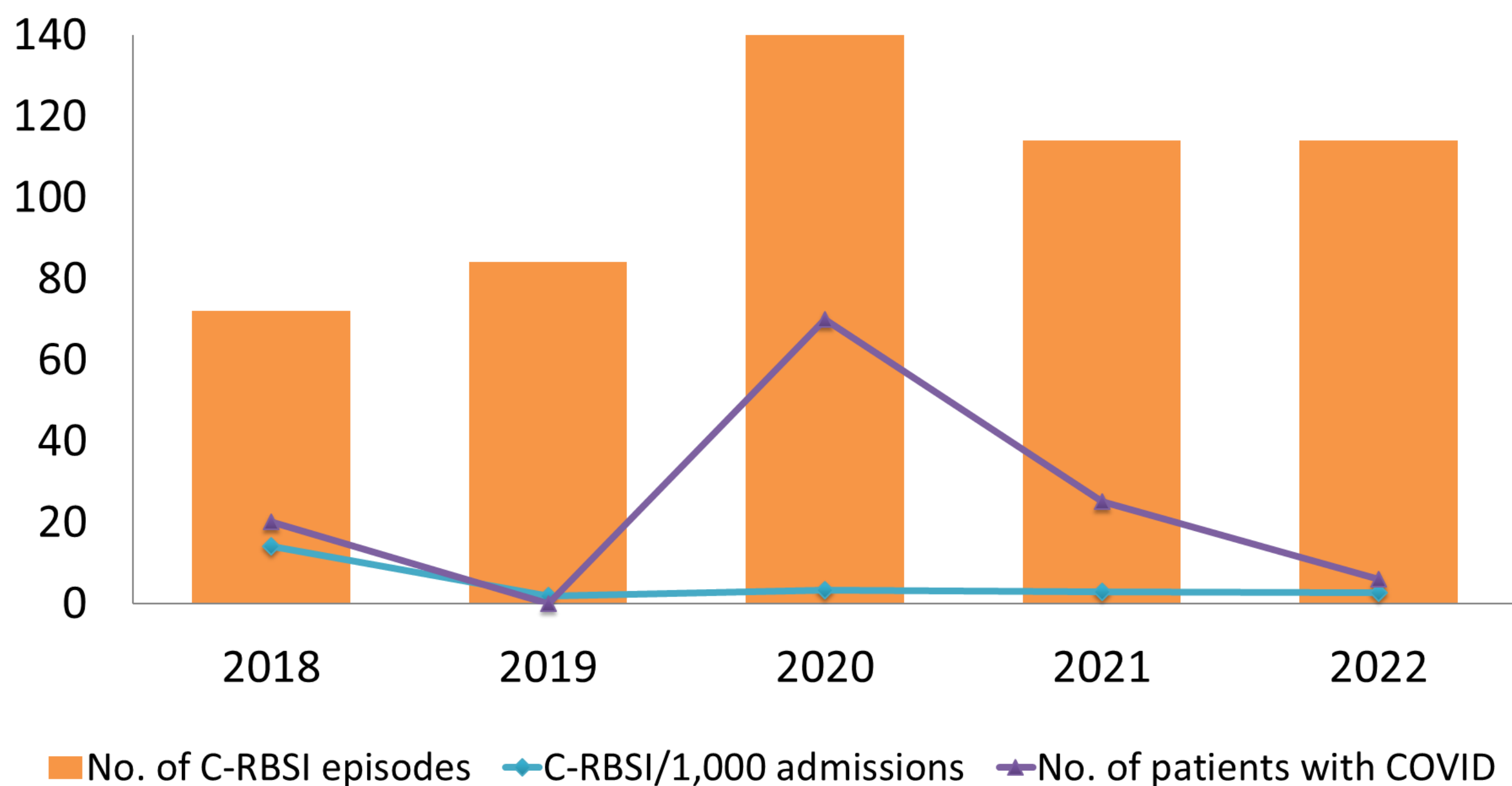


Figure 3. Ethiology of the C-RBSI episodes

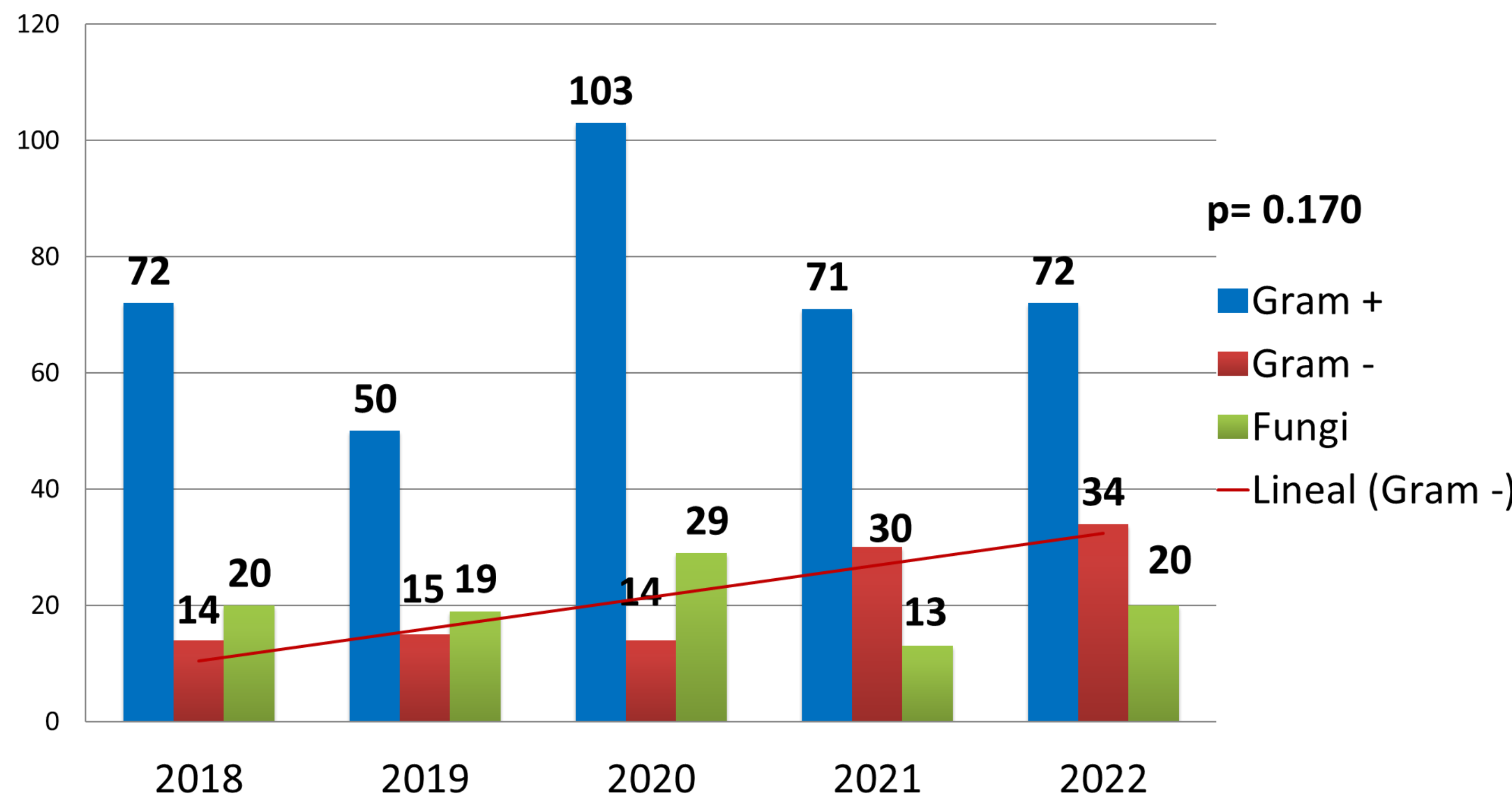


Figure 2. Type of catheters during the study period

