

4CPS-123 CASE-CONTROL STUDY ON THE ASSOCIATION BETWEEN NOSOCOMIAL BLOODSTREAM INFECTIONS AND GLUCOCORTICOIDS, TOCILIZUMAB, SYSTEMIC ANTIBIOTICS, MECHANICAL VENTILATION AND LENGTH OF HOSPITAL STAY IN COVID-19 HOSPITALISED PATIENTS

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Background and Importance Hospitalised patients with COVID-19 are often exposed to immunosuppressive and anti-inflammatory drugs in addition to systemic antibiotic treatments. Nosocomial bloodstream infections (nBSI) have been associated with the need for mechanical ventilation or venous catheter insertion. However, there is current controversy regarding the influence of immunosuppressive, anti-inflammatory and antimicrobial drugs on nBSI occurrence.

Aim and Objectives Assess the association between glucocorticoids, tocilizumab, systemic antibiotics and nonpharmacologic health interventions and the occurrence of nBSI in hospitalised patients with COVID-19.

Material and Methods Case-control study including cases of nBSI episodes in adult inpatients with SARS-CoV-2 pneumonia over a one-year period and controls without nBSI. Sociodemographic and clinical data were collected during hospitalisation. Bivariable analysis was performed. Numerical variables were compared using the Student's t-test or the Mann-Whitney test and categorical variables using the χ^2 or Fisher's exact test. Variables with a p-value < 0.1 in bivariable analysis were included in a multivariable logistic regression model to assess the factors independently associated with nBSI occurrence (p-value < 0.05).

Results 50 cases with COVID-19 and 50 controls were included. Mean age was 63.0 ± 12.4 (66% men, 2.3 ± 2.1 mean Charlson index and comparable between groups). nBSI episodes showed significantly higher length of hospital stay (LOS) (OR 1.173, 95% CI: 1.144-1.257, $p < 0.001$), surgeries (OR 10.80, 95% CI: 1.310-88.5, $p = 0.008$), need for mechanical ventilation (OR 8.10, 95% CI: 3.31-19.8, $p < 0.001$) antibiotic and glucocorticoids therapy days (OR 1.166, 95% CI: 1.112-1.122, $p = 0.017$ and OR 3.20, 95% CI: 1.325-7.287, $p = 0.010$, respectively), and tocilizumab use (OR 9.33, 95% CI: 1.115-77.125, $p = 0.017$). Non-significant higher number of chronic renal failure cases were present among nBSI episodes ($p = 0.1$). Multivariate regression analyses showed mechanical ventilation (aOR 4.892, 95% CI: 1.206-19.845, $p = 0.026$) and LOS (aOR 1.231, 95% CI: 1.104-1.371, $p < 0.001$) as independent risk factors for nBSI when corrected for the presence of surgeries, central venous catheter, tocilizumab, chronic renal failure and the days of antibiotic and glucocorticoid treatment.

Conclusion and Relevance This study found nBSI independently associated with mechanical ventilation and LOS and did not find an association between nBSI and the pharmacological interventions assessed. However, given the bivariate association between these pharmacological interventions and nBSI, and previous inconclusive literature on the effects of these treatments on bacterial and fungal infections occurrence, further investigation with a larger sample is required.¹

REFERENCE

1. Codina-Jiménez C., et al. Risk factors for nosocomial bloodstream infections in COVID-19 affected patients: protocol for a case-control study. *Eur J Hosp Pharm.* 2022

Conflict of Interest No conflict of interest

4CPS-125 PREEXPOSURE PROPHYLAXIS IN MEN AT HIGH RISK FOR HIV-1 INFECTION

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Background and Importance The Preexposure Prophylaxis (PrEP) for HIV infection with the drugs tenofovir and emtricitabine (FTC/TDF) is recommended by World Health Organization as part of HIV prevention to people at substantial risk HIV infection. Many countries have included it in their healthy police. However, there is a lack of information on its implementation in real practice.

Aim and Objectives To evaluate adherence, the effectiveness and safety to treatment for PrEP.

Material and Methods A retrospective and descriptive study of all adult patients who used FTC/TDF for PrEP from September 2020 to September 2022. Clinical data were obtained from digital clinical history and the prescription software Dominion®: sex, age, duration of treatment, high-risk for HIV and adherence to treatment.

The adherence to treatment was measured using the dispensing registry. Effectiveness was determined by relative reduction of HIV incidence; HIV testing was performed every three months during this study. In terms of safety, adverse events (AE) were recorded.

Results Forty patients, 100% men, were included, with an average aged of 35 (20-57) years. All patients were received (FTC/TDF), once daily. The average duration of treatment was 6 months (1-30), 8 patients received only two months. All patients were at high risk for HIV, defined as: sexual risk behaviour (ten or more sexual partners and any bacterial sexually transmitted infections (STIs) last year). 25% patients had discontinued therapy due to lack of adherence.

None of these patients were diagnosed HIV during study. 100% relative reduction of HIV incidence.

No treatment-associated adverse effects were observed, although 75% of patients had PrEP-associated bacterial STIs.

Conclusion and Relevance

- A quarter of patients were non-adherent to treatment, a possible alternative would be on-demand regimen in these cases.
- In terms of efficacy, a greater therapeutic result was observed, becoming a good tool prevention.
- PrEP used was associated high increased bacterial STIs, probably due to not using a condom.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest