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## The potential role of COVID-19 hygienic measures in reducing infective complications during hospitalization

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**Introduction & Objectives:** COVID-19 pandemic has significantly affected urological activity worldwide. The enhancement of hygienic measures including distancing, restricted access to the ward, reduction in the number of hospitalized patients and use of PPE has potentially reduced the risk of COVID-19 infections. These strategies could simultaneously reduce the risk of nosocomial infections during hospitalization. The aim of our study is to evaluate the effectiveness of prevention measures against COVID-19 in reducing the incidence of infectious complications during hospitalization.

**Materials & Methods:** In a retrospective observational study, we collected data of all patients admitted to two Urological centers: "Santa Croce and Carle" in Cuneo and "Policlinico Paolo Giaccone" in Palermo. We compared the period from February to May 2019 to the corresponding months of 2020. After collecting patients clinical characteristics (age, comorbidities, etc.), we evaluated the days of hospitalization, the number and type of surgical interventions (major, endoscopic - divided into upper and lower tract - and others), the onset of fever or new COVID-19 cases during hospitalization, the number of blood and urine cultures performed and the type of pathogen identified. Data were compared with media-standard deviation (SD) and with unpaired T-test. A value of  $p < 0.05$  was considered significant. Discrete data were analysed with contingency analysis. A  $\chi^2 < 0.05$  was considered significant.

**Results:** A total of 985 patients were included. Comparing 2019 with 2020, there was a statistically significant reduction in the incidence of post-operative fever considering all hospitalized patients ( $p < 0.001$ ). There was a statistically significant reduction in post-operative fever incidence after major surgery ( $p < 0.04$ ) and lower tract endoscopic procedures ( $p < 0.02$ ). There were no statistically significant differences in upper tract endoscopic procedures ( $p < 0.99$ ), neither in other minor surgical procedures ( $p < 0.6$ ). The rate of patients with positive blood culture compared to 2019 has decreased significantly ( $p < 0.007$ ), and although statistical significance was not reached, the same trend is observed in the number of patients with positive urine culture ( $p < 0.08$ ).

**Conclusions:** The strong prevention measures implemented during COVID-19 pandemic have led to a general significant decrease in infectious complications acquired during hospitalization. This is more evident in patients undergoing major surgical procedures that require longer hospital stay. The use of some of widely used preventive measures against COVID-19 should therefore be maintained in the hospital environment even at the end of the pandemic situation (e.g. frequent hand washing, reduced access to hospital wards and distancing between patients in hospital rooms and common spaces).