

Abstract Reviews

Sharing insights and updates from a selection of abstracts presented by leading experts in the field of urology at the European Association of Urology (EAU) Congress 2021.

How the COVID-19 Pandemic Changed Post-operative Infections in Urology Wards: A Retrospective Cohort Study from Urology Departments

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BACKGROUND AND AIMS

Hospital-acquired infections represent a global healthcare crisis, contributing to patient morbidity and mortality.¹ In response to the COVID-19 pandemic, hospitals had to re-organise wards, postpone elective procedures, and cancel non-urgent activities. Measures to limit the spread of the disease included restrictions to patients' visitors, avoidance of street clothes by healthcare professionals, frequent object disinfection, and improved hand hygiene. Some of these measures have been shown to lower the rate of hospital-acquired infections and, as a result, the authors hypothesised that the occurrence of post-operative infection during the pandemic would be lower.^{2,3} The objective of the authors' study was to compare the rate of post-operative infections and patterns of antimicrobial resistance before and during the pandemic in urology departments.

MATERIALS AND METHODS

This was an observational retrospective cohort study carried out in two Portuguese centres. Data from all elective surgical procedures between April and June 2018 and the homologous period in 2020 were collected.

Table 1: Demographics and characteristics of patients submitted to elective urological surgery.

	Pre-pandemic period (n=425)	Pandemic period (n=273)	p value
Age, median (years, IQR)	65 (55-74)	65 (54-72)	0.361
Sex, Male (%)	319 (75.1)	203 (74.4)	0.858
Hospital stay, median (days, IQR)	3 (2-5)	3 (2-6)	0.806
ASA (%)			
I	29 (6.8)	13 (4.8)	0.125
II	273 (64.2)	168 (61.5)	
III	113 (26.6)	90 (33.0)	
IV	9 (2.1)	2 (0.7)	
Missing	1	0	NA
Antibiotic prophylaxis (%)			
None	5 (1.2)	12 (4.6)	0.024
Standard	225 (54.7)	139 (53.5)	
Prolonged	181 (44.0)	109 (41.9)	
Missing	14	13	NA
Peri-operative devices (%)	171 (40.2)	127 (46.7)	0.100
Pre-operative positive urine culture (%)	33 (24.6)	28 (27.5)	0.654
Post-operative infection (%)	60 (14.1)	33 (12.1)	0.494
Positive cultures	25/60 (47.2)	22/33 (62.9)	0.192
Drug-resistant species	24/25 (92.3)	11/22 (52.4)	0.003
Endoscopic intra-renal surgery	54 (12.7)	33 (12.1)	0.816
Lower urinary tract endoscopic surgery	182 (42.8)	110 (40.3)	0.530
Kidney and ureter surgery	51 (12.0)	34 (12.5)	0.906
Prostate surgery	74 (17.4)	35 (12.8)	0.110
Radical cystectomy	9 (2.1)	13 (4.8)	0.074
Genital surgery	55 (12.9)	48 (17.6)	0.101

ASA: American Society of Anesthesiologists; IQR: interquartile range; NA: not applicable.

Patient data included age, sex, post-operative in-hospital length of stay, American Society of Anesthesiologist (ASA) score, type of procedure, antibiotic prophylaxis, pre-operative urine cultures, peri-operative use of medical devices, post-operative infections, microbial culture, and antimicrobial susceptibility testing. Infection was defined according to the European Centre for Disease Prevention and Control (ECDC) protocol. Multidrug resistant (MDR) organism was defined as a micro-organism resistant to one or more classes of antimicrobial agents tested. The main outcomes were the number of post-operative infections during the pandemic and the number of MDR isolates.

RESULTS

Baseline characteristics are presented in [Table 1](#). The post-operative infection rate during the pre-pandemic period was 14.1% compared with 12.1% during the pandemic ($p=0.494$). Ninety two percent of isolates were MDR in the pre-pandemic period compared with 52% during the pandemic ($p=0.002$). The pandemic period was associated with a reduced risk for MDR isolates on multivariate logistic regression analysis (odds ratio: 0.1; 95%

confidence interval: 0.07–0.57; $p=0.010$), but not with reduced number of infections (odds ratio: 0.84; 95% confidence interval: 0.53–1.34; $p=0.47$).

CONCLUSION

MDR isolates were lower during the pandemic in urology wards, possibly as an indirect result of COVID-19 preventive measures such as increased hand hygiene, room disinfection, and reduced family visits to inpatients. No statistically significant difference was found between the number of post-operative infections in the authors' sample. Further reports such as those from the ECDC are needed to confirm the authors' results. ■

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Linguistic and Clinical Validation of the Spanish Acute Cystitis Symptoms Score Questionnaire in Females with Acute Cystitis

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