39°CBU

The Impact of the Covid-19 Pandemic on bladder cancer care in a tertiary oncological center

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Introdução e Objetivo

COVID-19 is a disease caused by the Coronavirus SARS-CoV-2, which ranges from asymptomatic infections to severe respiratory conditions. The COVID-19 pandemic emerged in late 2019 and precipitated a global health crisis, profoundly impacting medical specialties, including urology.

During the pandemic, healthcare institutions had to reallocate resources and staff to manage high infection rates. Consequently, many elective surgical procedures, including those for cancer, were postponed after government lockdown measures and hospital protocols.

On the other hand, concerns about the potential progression of the disease are raised, impacting both quality of life and survival outcomes, particularly in cancer patients.

In this study, we assessed the impact of COVID-19 on bladder cancer care by analyzing and comparing the clinical, epidemiological characteristics, and oncological outcomes of patients treated for bladder cancer in 2019, 2020, and 2021.

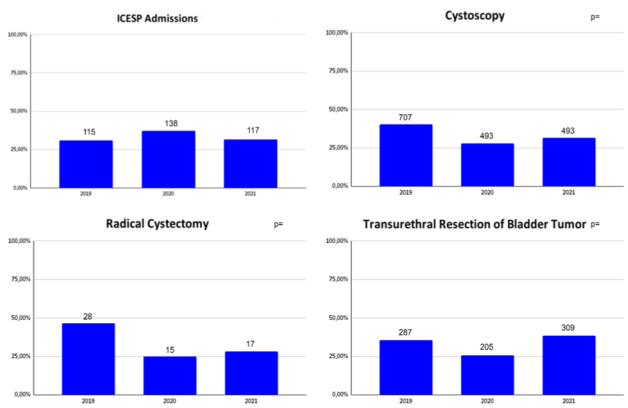
Método

We collected data of patients with newly diagnosed bladder cancer (BC) admitted in our tertiary oncological center, patients that were undergoing radical cystectomy (RC) and quantified number of urological procedures at the ICESP between January 2019 and December 2021.

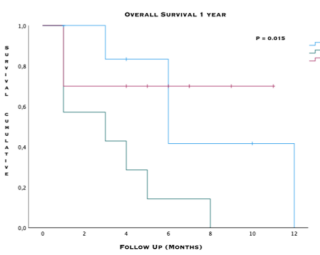
We analyzed the following clinical and pathological factors: age at RC, gender, body mass index (BMI) (kg/m²), patient smoking status, American Society of Anaesthesiologists physical status (ASA Score), Age-adjusted Charlson Comorbidity Index (ACCI), presence of hydronephrosis in CT-Scan, hematuria, neoadjuvant chemotherapy, clinical and pathological tumor staging, number of lymph nodes and presence of lymph-vascular Invasion, number of cystoscopies, transurethral bladder resection tumor (TURBT), radical cystectomies and confirmed cases of COVID-19 in patients underwent to RC.

Overall survival (OS) was calculated from the surgery date to either the last follow-up or the date of death. Patients were divided and compared into three groups (2019, 2020 and 2021).

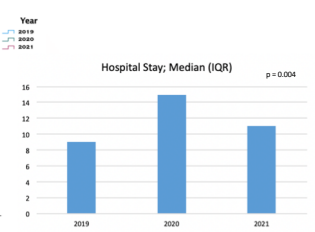
Figuras



Number of ICESP admissions and number procedures related to bladder cancer.



Kaplan-Meier overall survival for 1 year for patients underwent radical cystectomy.



Median hospital stay after radical cystectomy.

Resultados

Clinical characteristics of patients admitted:

No significant differences among the years.
Overall population: 378 patients

- Mean age: 67 years
- Male: 72%
- Mean BMI: 25,7
- Past smokers: 52,3%
- KPS ≥ 70 %: 87,6%
- CCI < 7: 71,1%
- Hematuria: 80%
- Hydronephrosis: 32,5%
- First TURBT after ICESP admission: 56,8%

Clinical staging in the first oncological consultation:

No significant differences among the years.

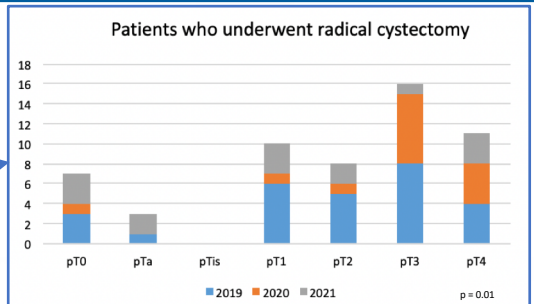
Ta: 27,5%
Tis: 2,9%
T1: 12,7%
T2: 27,5%
T3: 17,1%
T4: 12,1%

N0: 72,7%
N1: 5,0%
N2: 10,0%
N3: 10,3%
Nx: 2,0%

Muscle invasive: 57%

M0: 81,4%
M1a: 4,1%
M1b: 13,2%
Mx: 1,1%

60 patients



No significant differences were found in lymphonodal stage, positive lymphonodes status, lymphovascular invasion or the total number of lymph nodes dissected.

Conclusão

The COVID-19 pandemic, which originated in late 2019, has profoundly affected healthcare systems worldwide, including urological procedures and oncological management. Our study examines the impact of the pandemic on BC admissions, clinical profiles, and procedures from 2019 to 2021. Several significant findings have emerged, shedding light on the multifaceted influence of the pandemic on BC care, particularly within the context of the Brazilian healthcare system.

The clinical and epidemiological characteristics of patients admitted during the pandemic years remained stable. The distribution of cT stages did not exhibit statistically significant differences in the admitted patients across the years (2019, 2020, and 2021) either. However, the higher proportion of patients with advanced staging in RC specimens in 2020 ($p<0.05$), compared to other years, may indicate potential delays in diagnosis and treatment during the pandemic.

The study reveals the impact of COVID-19 on the treatment of bladder cancer, affecting staging, diagnostic approaches, surgical volumes and survival of these patients. These results underscore the importance of adaptive healthcare strategies during pandemics. Future research should investigate the extended consequences of these pronounced changes in 2020 oncological care helping to assist future pandemic surgical guidelines.

Referências

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