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Original article

Evolution of hospitalized COVID-19 cases with emphasis on the first pandemic year: experience from the University Clinical Center of Republic of Srpska

Nataša Janjić[1,2,4], Goran Bokan[1,3,4], Uroš Kalajdžić[2], Antonija Verhaz[1,3], Slavica Zeljković[3], Zoran Mavija[1,3]

[1]University of Banja Luka, Faculty of Medicine, Banja Luka, Republic of Srpska, Bosnia and Herzegovina

[2]General hospital "St. Apostle Luka" Doboj, Republic of Srpska, Bosnia and Herzegovina

[3]University Clinical Centre of Republic of Srpska, Banja Luka, Republic of Srpska, Bosnia and Herzegovina

[4]University of East Sarajevo, Faculty of Medicine, Foča, Republic of Srpska, Bosnia and Herzegovina

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Corresponding author:
Nataša Janjić, MD
Dvanaest beba,
78000 Banja Luka
natasa_janjic@hotmail.com

Summary

Introduction. Infection caused by the novel coronavirus (SARS-CoV-2) emerged in 2019 in China and rapidly spread worldwide. This highly contagious virus is transmitted primarily through respiratory droplets and may lead to Severe Acute Respiratory Syndrome (SARS). The World Health Organization (WHO) declared Coronavirus Disease 2019 (COVID-19) a global pandemic on March 11, 2020. This study analyzed patients hospitalized at the University Clinical Center of Republic of Srpska (UCC RS) during the first 12 months of the pandemic.

Methods. Data from all patients with laboratory-confirmed SARS-CoV-2 infection, diagnosed using real-time reverse transcription polymerase chain reaction (RT-PCR), were collected between March 2020 and March 2021. Patients were analyzed according to age, sex, severity of clinical presentation, duration of hospitalization, and the outcome.

Results. One year after the first confirmed COVID-19 case in Republic of Srpska, a total of 5,956 COVID-19–positive patients were hospitalized, including 3,662 males and 2,294 females. The mean duration of hospitalization was nine days, with a statistically significant difference across clinics ($p = 0.001$). Patients older than 60 years represented the most prevalent age group. During the observed period, 84.53% of patients recovered, while 15.47% died. Cardiovascular diseases were the most common comorbidities, presented in 24.71% of patients.

Conclusion. Male patients were more frequently hospitalized than females, with statistically significant sex differences observed only at the Anaesthesia and Intensive Care Clinic ($p < 0.05$). Patients older than 60 years were more susceptible to severe complications and fatal outcomes, with a predominance of male sex.

Key words: coronavirus, covid-19, pandemic, hospital treatment, outcome

Introduction

In late 2019, a cluster of cases of pneumonia of unknown etiology was reported in Wuhan, Hubei Province, China. Subsequent epidemiological investigations led to the identification of a novel coronavirus as the causative agent of the outbreak. On January 7, 2020, Chinese authorities officially confirmed the discovery of this previously unknown virus, later designated as

severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) [1, 2]. The disease caused by this virus was named Coronavirus Disease 2019 (COVID-19).

Genomic and phylogenetic analyses demonstrated that SARS-CoV-2 belonged to the Betacoronavirus genus and shared significant sequence homology with coronaviruses detected in bats, suggesting a zoonotic origin [3]. However, despite extensive research efforts, the precise source and intermediate host responsible for transmission to humans remained uncertain [4]. The rapid spread of the virus shortly after its identification indicated a high capacity for human-to-human transmission and posed an unprecedented global public health challenge.

SARS-CoV-2 is primarily transmitted via respiratory droplets and close interpersonal contact, particularly in settings involving prolonged exposure [5]. Following infection, the incubation period is variable, most commonly ranging from two to 14 days, with the majority of symptomatic cases developing clinical manifestations within the first week after exposure. COVID-19 is associated with a broad spectrum of clinical presentations, ranging from asymptomatic infection and mild upper respiratory symptoms to severe viral pneumonia and critical illness characterized by acute respiratory distress syndrome (ARDS), septic shock, and multiorgan dysfunction [6].

Beyond the acute phase of infection, COVID-19 has been shown to exacerbate pre-existing respiratory and cardiovascular diseases and may result in long-term pulmonary sequelae. Emerging evidence suggests that a subset of recovered patients develops persistent respiratory symptoms and radiological abnormalities consistent with post-inflammatory pulmonary fibrosis, highlighting the potential long-term burden of the disease on healthcare systems [7].

Laboratory confirmation of SARS-CoV-2 infection relies on molecular diagnostic techniques, with real-time reverse transcription polymerase chain reaction (RT-PCR) considered the gold standard for detection of viral RNA in respiratory specimens [8]. During the first year of the pandemic, diagnostic strategies focused on timely identification of infected individuals to facilitate isolation, contact tracing, and appropriate clinical management.

At the beginning of the pandemic, no specific antiviral therapy with proven efficacy against SARS-CoV-2 was widely available. Treatment strategies were primarily supportive and based on symptom severity, including oxygen supplementation, ventilatory support, and management of complications [9]. Clinical decision-making was guided by continuously evolving national and international recommendations, as evidence regarding therapeutic interventions gradually emerged [10].

Given the rapid global spread of the disease and the increasing number of affected countries, the World Health Organization (WHO) declared COVID-19 a global pandemic on March 11, 2020 [11]. In Republic of Srpska, the first laboratory-confirmed case of COVID-19 was recorded on March 5, 2020. Shortly thereafter, emergency public health measures were implemented, including restrictions on movement, reorganization of healthcare services, and expansion of hospital capacities dedicated to the treatment of COVID-19 patients [12, 13].

The University Clinical Center of Republic of Srpska (UCC RS), as the largest tertiary healthcare institution in the region, was designated as a key referral center for the management of hospitalized COVID-19 patients. In response to the evolving epidemiological situation, multiple hospital clinics were reorganized to accommodate patients with varying degrees of disease severity, ranging from mild and moderate cases requiring inpatient monitoring to critically ill patients requiring intensive care support.

During the first year of the pandemic, hospitals worldwide faced significant organizational and clinical challenges, including shortages of personnel and equipment, rapidly changing treatment protocols, and high number of patients. Hospital-based studies play a

crucial role in understanding the real-world clinical course of COVID-19, identifying risk factors for severe disease and mortality, and evaluating healthcare system responses during public health emergencies.

The aim of this study was to provide a comprehensive analysis of the clinical and epidemiological characteristics of patients hospitalized with laboratory-confirmed COVID-19 at the University Clinical Center of Republic of Srpska during the first 12 months of the pandemic. Specifically, the study sought to assess patient demographics, disease severity, duration of hospitalization, distribution across hospital clinics, comorbidities, and clinical outcomes, with the goal of contributing to a better understanding of the impact of COVID-19 on hospitalized patients and informing future preparedness and response strategies.

Methods

Study design and setting

This study was designed as a retrospective, observational, single-center cohort study conducted at the University Clinical Center of Republic of Srpska (UCC RS), the largest tertiary healthcare institution in Republic of Srpska. During the COVID-19 pandemic, UCC RS was officially designated as a referral hospital for the diagnosis and treatment of patients with confirmed SARS-CoV-2 infection, providing care for patients across a broad spectrum of disease severity.

The study period encompassed the first 12 months of the pandemic, from March 5, 2020, when the first confirmed COVID-19 case was recorded in Republic of Srpska, until March 31, 2021. This time frame corresponds to the initial and most challenging phase of the pandemic, characterized by limited therapeutic options, evolving clinical guidelines, and substantial organizational demands on the healthcare system.

Study population

The study population included all adult and pediatric patients hospitalized at UCC RS during the study period with laboratory-confirmed SARS-CoV-2 infection. Confirmation of infection was based on the positive real-time reverse transcription polymerase chain reaction (RT-PCR) test performed on nasopharyngeal and/or oropharyngeal swab samples, in accordance with standardized diagnostic protocols [14].

Patients were eligible for inclusion if they met the following criteria:

- hospitalization at UCC RS between March 2020 and March 2021;
- laboratory confirmation of SARS-CoV-2 infection by RT-PCR;
- admission to one of the hospital clinics designated for the treatment of COVID-19 patients.

Patients with negative RT-PCR test results, those with clinically suspected but unconfirmed COVID-19 infection, and patients treated exclusively in outpatient settings were excluded from the analysis. Each patient was included only once in the study, and outcomes were attributed to the clinic in which the patient completed treatment.

Classification of clinical severity

Clinical severity at admission and during hospitalization was classified into three categories—mild, severe, and critical—based on institutional protocols aligned with international clinical management recommendations [6, 15].

- Mild disease was defined as the presence of mild clinical symptoms, with or without radiological evidence of mild pneumonia, not requiring supplemental oxygen therapy.
- Severe disease was defined by the presence of dyspnea, hypoxia (oxygen saturation < 94% on room air), or lung

involvement exceeding 50% on chest imaging within 24–48 hours.
- Critical disease was defined as respiratory failure requiring mechanical ventilation, septic shock, or evidence of multiorgan dysfunction necessitating admission to an intensive care unit.

Disease severity classification was used both for descriptive analysis and for stratification of patients according to the level of care required during hospitalization.

Hospital organization and patient distribution

In response to the increasing number of COVID-19 cases, UCC RS underwent substantial organizational restructuring during the study period. Several hospital clinics were designated to manage COVID-19 patients, depending on disease severity and available resources.

Patients were hospitalized and treated in the following units:

- Infectious Diseases Clinic (IDC),
- Lung Diseases Clinic (LDC),
- Anaesthesia and Intensive Care Clinic (AICC),
- Emergency Medicine Center (EMC),
- Intensive Care Unit for Non-Surgical Branches (ICU).

Transfers between clinics occurred as a result of disease progression, improvement, or logistical reorganization during different pandemic waves. These transfers were documented in the hospital information system and considered during data analysis.

Data collection

Data were obtained retrospectively from the UCC RS Clinical Information System using the Aqua software application. A standardized data extraction protocol was developed to ensure consistency and completeness of collected information.

The following variables were extracted:

- demographic characteristics (age and sex),
- clinic of hospitalization,
- duration of hospital stay (in days),
- clinical severity category,
- documented comorbidities, with particular focus on cardiovascular and oncological diseases,
- clinical outcome (recovery/discharge or in-hospital death).

To preserve data integrity and patient confidentiality, all data were anonymized prior to analysis, and no personal identifiers were included in the study dataset.

Outcomes

The primary outcome of the study was in-hospital mortality. Secondary outcomes included duration of hospitalization and distribution of disease severity across different hospital clinics. Recovery was defined as discharge from hospital following clinical improvement, while death was defined as in-hospital mortality occurring during the treatment course for COVID-19.

Statistical analysis

Categorical variables were expressed as absolute numbers and percentages. Continuous variables were summarized using mean values and standard deviations, as appropriate. Differences in categorical variables between groups were analyzed using the Chi-square test.

Comparisons of hospitalization duration across different clinics were performed to assess variability related to disease severity and level of care. A p-value of less than 0.05 was considered statistically significant for all

analyses. Statistical analyses were performed using IBM SPSS Statistics version 20.0 and Microsoft Excel.

Results

Overall patient characteristics

During the first year of the COVID-19 pandemic, from March 2020 to March 2021, a total of 5,956 patients with laboratory-confirmed SARS-CoV-2 infection were hospitalized in clinics dedicated to COVID-19 treatment at the University Clinical Center of Republic of Srpska (UCC RS).

Among all hospitalized patients, 3,662 (61.48%) were males, while 2,294 (38.52%) were females, indicating a clear predominance of male patients in the hospitalized cohort. With respect to disease severity at admission or during hospitalization, severe clinical presentation was the most frequent, observed in 5,213 patients (87.52%). Critical illness was documented in 569 patients (9.55%), whereas mild clinical presentations were relatively uncommon, occurring in 178 patients (2.98%).

Analysis of age distribution demonstrated that patients older than 60 years constituted the largest age group, accounting for 3,546 individuals (59.53%) of the total study population. Patients younger than 21 years represented the least prevalent age category across all clinics. No statistically significant differences in age structure were observed when comparing patient groups.

The mean duration of hospitalization for the entire cohort was nine days, with a wide range extending from 1 to 62 days. A statistically significant difference in hospitalization duration was identified among different hospital clinics ($p = 0.001$), reflecting differences in disease severity and required levels of care. Detailed demographic and clinical characteristics of the overall hospitalized population are presented in Table 1.

Comorbidities and overall outcomes

Assessment of comorbid conditions revealed that cardiovascular diseases (CVDs) were the most frequently documented comorbidities, affecting 1,472 patients (24.71%). Oncological

Table 1. Characteristics of all COVID-19 positive patients hospitalized in UCC RS

Characteristic		Number	Percentage (%)	MEAN± SD	P value
Total number of patients		5956	100	-	-
Critical clinical presentation		569	9.55	-	-
Severe clinical presentation		5213	87.52	-	-
Mild clinical presentation		175	2.93	-	-
Sex	Male	3662	61.48	732.4±778.24	-
	Female	2294	38.52	458.8±489.34	-
Most common age structure		>60	59.53	-	-
Mean duration of hospitalization (number of days)		9	-	-	-
Comorbidity	Cardiovascular	1472	24.71	-	0.074
	Oncological	82	1.37	-	0.010
Dead		922	15.5	-	0.028

*SD - standard deviation; statistical test used: Chi-Square test; p - value < 0.05 is considered statistically significant

diseases were recorded in 82 patients (1.37%). Although cardiovascular comorbidities were common, their overall distribution did not reach statistical significance (p = 0.074), while oncological comorbidities showed a statistically significant difference (p = 0.010).

Regarding clinical outcomes, 5,034 patients (84.52%) recovered and were discharged, whereas 922 patients (15.48%) died during hospitalization. The observed in-hospital mortality rate was statistically significant (p = 0.028). The ratio of recovered to deceased patients for the entire cohort is illustrated in Figure 1.

Distribution of patients by hospital clinics

During the study period, patients were distributed across five hospital units dedicated to COVID-19 care. The largest number of patients was treated in the Infectious Diseases Clinic (IDC), with 3,000 hospitalizations, followed by the Lung Diseases Clinic (LDC) with 2,043 patients. A total of 294 patients were treated in the Anaesthesia and Intensive Care Clinic (AICC), 142 patients in the Emergency Medicine Center (EMC), and 477 patients in the Intensive Care Unit for Non-Surgical Branches (ICU).

Male predominance was observed in all clinics, ranging from 53.06% in AICC to 70.65% in ICU. A statistically significant difference in sex distribution was identified only in AICC (p = 0.042), while sex differences in other clinics were not statistically significant.

Patients older than 60 years represented the most common age group in all clinics, with the highest proportion observed in AICC (77.92%). Clinic-specific demographic characteristics are summarized in Table 2.

Disease severity by clinic

Marked differences in disease severity distribution were observed among hospital clinics. In the Infectious Diseases Clinic, the majority of patients were with severe disease (92.97%), while critical illness accounted for only 2.06%, and mild disease for 4.97% of cases. A similar pattern was observed in the Lung Diseases Clinic, where 96.88% of patients had severe disease, 2.87% were critically ill, and 0.25% had mild disease.

In contrast, clinics providing intensive care managed predominantly critically ill patients. In the Anaesthesia and Intensive Care Clinic, 166 patients (56.49%) were admitted with critical illness, while 128 patients (43.51%) had severe disease; no patients with mild disease were treated in this clinic. Similarly, the Intensive Care Unit treated 272 critically ill patients (56.97%) and 205 patients (43.03%) with severe disease.

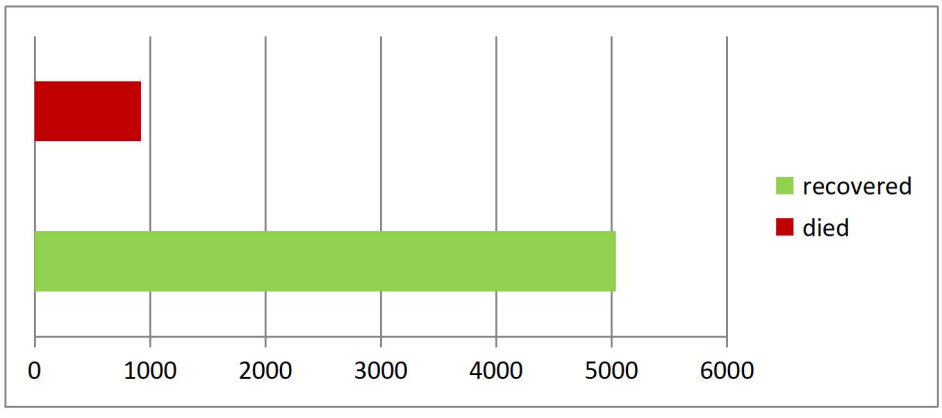

Figure 1. Ratio of cured and patients who have died

Table 2. Characteristics of COVID-19 positive patients divided by clinics

Characteristic		Infectous diseases clinic	Lung diseases clinic-old location	Anaesthesia and intensive care clinic	Emergency medicine center	Intensive care clinic for non-surgical branches
Total number of patients		3000	2043	294	142	477
Male		1856 (61.87%)	1231 (60.25%)	156 (53.06%)	82 (57.75%)	337 (70.65%)
Female		1144 (38.13%)	812 (39.75%)	138 (46.94%)	60 (42.25%)	140 (29.35%)
p - value		0.149	0.129	0.042	0.104	0.252
Most common age structure		>60 (50.86%)	>60 (55.64%)	>60 (77.92%)	>60 (47.76%)	>60 (50.60%)
Average duration of hospitalization (number of days)		9.1	9.1	12.8	9.5	14.2
Comorbidities	Cardiovascular	748 (24.93%)	290 (14.19%)	238 (80.95%)	17 (11.97%)	179 (37.53%)
	Oncological	17 (0.57%)	23 (1.13%)	6 (2.04%)	25 (17.61%)	11 (2.31%)
p - value		0.486	0.450	0.484	0.120	0.461
Died		175 (5.83%)	127 (6.22%)	259 (88.1%)	20 (14.08%)	341 (71.49%)
Released/cured		2825 (94.17%)	191 (93.78%)	35 (11.9%)	122 (85.92%)	136 (28.51%)

The Emergency Medicine Center managed a more heterogeneous patient population, including 112 patients (78.87%) with severe disease, 9 patients (6.34%) with critical illness, and 21 patients (14.79%) with mild clinical presentation.

Clinic-specific hospitalization duration and comorbidities

The average length of hospitalization varied across clinics. Mean hospital stay was 9.1 days in both the Infectious Diseases Clinic and Lung Diseases Clinic, 12.8 days in the Anaesthesia and Intensive Care Clinic, 9.5 days in the Emergency Medicine Center, and it was the longest in the Intensive Care Unit, with a mean duration of 14.2 days.

Cardiovascular diseases were the most frequently documented comorbidity in nearly all clinics, particularly in AICC (80.95%) and ICU (37.53%). An exception was observed in the Emergency Medicine Center, where oncological comorbidities (17.61%) were more prevalent. No statistically significant differences in comorbidity distribution were observed across clinics (Table 2).

Outcomes by clinic

Clinical outcomes varied substantially depending on the clinic and level of care provided. The Infectious Diseases Clinic reported the highest recovery rate, with 2,825 patients (94.17%) discharged after recovery and 175 deaths (5.83%). Similarly, in the Lung Diseases Clinic, 1,916 patients (93.78%) recovered, while 127 patients (6.22%) died.

In contrast, mortality was markedly higher in clinics managing critically ill patients. In the Anaesthesia and Intensive Care Clinic, only 35 patients (11.9%) recovered, while 259 patients (88.1%) died. The Intensive Care Unit recorded 136 recoveries (28.51%) and 341 deaths (71.49%), representing the highest absolute number of deaths among all clinics.

In the Emergency Medicine Center, 122 patients (85.92%) recovered, while 20 patients (14.08%) died. Clinic-specific outcomes are illustrated in Figure 2.

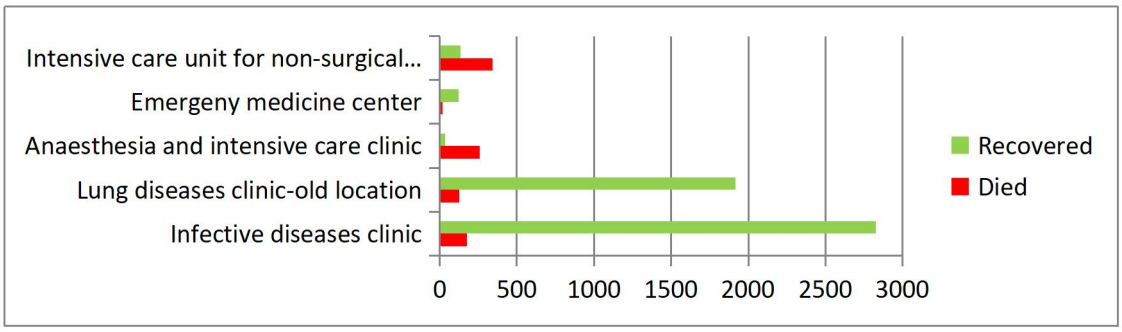

Figure 2. A review of recovered and patients who died by clinics

Discussion

This retrospective, single-center cohort study provides a comprehensive overview of the clinical and epidemiological characteristics, disease severity, and outcomes of patients hospitalized with COVID-19 at the University Clinical Center of Republic of Srpska (UCC RS) during the first year of the pandemic. As the tertiary referral institution designated for COVID-19 care, UCC RS predominantly managed patients with moderate to severe disease, which was reflected in the high proportion of severe and critical cases and the observed in-hospital mortality rate. Similar hospital-based cohorts have reported comparable disease severity distributions and outcomes, emphasizing the importance of contextualizing mortality rates within hospitalized populations rather than the general population [16, 17].

Demographic characteristics and sex distribution

Male patients accounted for nearly two thirds of all hospitalizations in this study, indicating a clear predominance of male sex among hospitalized COVID-19 patients. This finding is consistent with reports from multiple international cohorts demonstrating higher rates of severe disease, hospitalization, and mortality among males compared with females [18, 19]. Biological differences in immune response, sex-related hormonal effects, differential expression of angiotensin-converting enzyme 2 (ACE2) receptors, as well as a higher prevalence of comorbidities among men, have been proposed as potential mechanisms underlying these observations [19].

Although male predominance was evident across most hospital clinics, statistically significant sex differences were observed only in the Anaesthesia and Intensive Care Clinic (AICC). This suggests that male sex may be particularly associated with progression to critical illness requiring intensive care, rather than hospitalization alone. Similar patterns have been described in other intensive care cohorts, where male patients were disproportionately represented among those requiring mechanical ventilation and advanced life support [20, 21].

Age structure and vulnerability of older patients

Advanced age emerged as one of the most prominent characteristics of the hospitalized population, with patients older than 60 years accounting for nearly 60% of all admissions. This observation is in line with extensive evidence demonstrating that older age is one of the strongest predictors of severe COVID-19 and mortality [19, 22]. Age-related immunosenescence, the presence of multiple chronic diseases, and reduced physiological reserve likely contribute to increased vulnerability and worse outcomes in elderly patients.

The relatively small proportion of hospitalized children and young adults observed in this study further supports previous findings that younger populations are less likely to develop severe clinical manifestations requiring hospital treatment [23]. While children and adolescents can be infected with SARS-CoV-2, their clinical course is generally milder, which significantly reduces the need for hospitalization.

Disease severity and hospital organization

A striking finding of this study was the very high proportion of patients with severe disease, accounting for nearly 88% of all hospitalizations. This reflected the hospital-based nature of the cohort and admission policies applied during the first year of the pandemic, when hospitalization was primarily reserved for patients with significant respiratory compromise or a high risk of disease progression. Similar distributions of disease severity have been reported in hospital-based studies conducted during the early pandemic phase [24, 25].

Clear differences in disease severity distribution were observed across hospital clinics, reflecting their distinct roles within the institutional COVID-19 care pathway. The Infectious Diseases Clinic (IDC) and Lung Diseases Clinic (LDC) mainly managed patients with severe but stable disease, whereas the AICC and Intensive Care Unit (ICU) treated predominantly critically ill patients. This organizational stratification mirrors models described in other healthcare systems, where stepwise escalation of care was implemented to optimize resource utilization during pandemic surges [20, 25].

Comorbidities and cardiovascular disease burden

Cardiovascular diseases were the most frequently documented comorbidities in the hospitalized cohort, affecting approximately one quarter of all patients. This finding is consistent with numerous studies identifying cardiovascular conditions as major risk factors for severe COVID-19 and adverse outcomes [21]. Patients with underlying cardiovascular disease are more susceptible to acute cardiac complications during SARS-CoV-2 infection, including myocardial injury, arrhythmias, and heart failure, which may contribute to disease progression and increased mortality [18].

Although no statistically significant differences in the distribution of cardiovascular comorbidities were observed across clinics, their high prevalence in intensive care settings underscored the close relationship between cardiovascular vulnerability and critical illness in COVID-19. The higher prevalence of oncological comorbidities observed in the Emergency Medicine Center may reflect referral patterns or underlying patient characteristics rather than true epidemiological differences.

Clinical outcomes and mortality

The overall in-hospital mortality rate of 15.5% observed in this study reflects the predominance of severe and critical cases in the hospitalized cohort. Mortality rates varied substantially between clinics, highlighting the strong association between disease severity and outcome. High recovery rates exceeding 90% were achieved in IDC and LDC, where patients with moderate to severe but stable disease were primarily treated. These findings are consistent with reports indicating favorable outcomes when timely supportive care and oxygen therapy are provided [24, 25].

In contrast, mortality was markedly higher in clinics managing critically ill patients. AICC and ICU exhibited the highest mortality rates, which is in line with international reports describing high mortality among patients with COVID-19 requiring intensive care, particularly during the early stages of the pandemic

[20, 21, 25]. The elevated mortality observed in these units likely reflected referral bias, as they primarily treated patients with advanced respiratory failure, refractory hypoxemia, and multiorgan dysfunction.

When compared with international data, the mortality observed at UCC RS appeared lower than that reported in some early Italian cohorts [16], yet comparable to other hospital-based studies conducted during the same period. Differences in patient demographics, admission criteria, healthcare system capacity, and timing of pandemic waves likely contributed to these variations.

Strengths and limitations

The major strength of this study lies in its large sample size and comprehensive inclusion of hospitalized COVID-19 patients treated at the major tertiary care center over a full year of the pandemic. The inclusion of multiple hospital clinics enabled detailed analysis of disease severity, organizational structure, and outcomes across different levels of care.

However, several limitations should be acknowledged. The retrospective and single-center design limits generalizability and precludes causal inference. Only hospitalized patients were included, introducing selection bias toward more severe disease. Data on specific therapeutic interventions, ventilatory strategies, vaccination status, and circulating viral variants were not available, limiting more granular analysis of factors influencing outcomes [21, 25]. Additionally, comorbidities may have been underreported due to variability in clinical documentation, and long-term outcomes after hospital discharge were not assessed.

Clinical and public health implications

Despite these limitations, the findings provide valuable insight into the burden of COVID-19 on the hospital system of Republic of Srpska during the first year of the pandemic. The results emphasize the importance of early identification of high-risk patients, adequate hospital preparedness, and flexible organizational strategies to manage surges in critically ill patients. Hospital-based analyses such as this one are essential for informing healthcare planning and improving preparedness for future infectious disease outbreaks [20, 25].

Conclusion

This single-center retrospective study summarizes the clinical and epidemiological characteristics of patients hospitalized with COVID-19 at the University Clinical Center of Republic of Srpska during the first year of the pandemic. Hospitalized patients were predominantly males and older than 60 years, with cardiovascular diseases representing the most common comorbidities.

The overall in-hospital mortality rate of 15.5% reflected the predominance of severe and critical cases, with the highest mortality observed among patients treated in intensive care settings. In contrast, high recovery rates were achieved in clinics managing patients with moderate to severe disease, indicating the effectiveness of timely hospital care.

Despite its limitations, this study provides valuable insight into the burden of COVID-19 on the hospital system and highlights the importance of early identification, hospital preparedness, and targeted management of high-risk patient groups to reduce adverse outcomes during pandemic outbreaks.

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Ethical approval. The Ethics Committee of the University of Banja Luka, Faculty of Medicine, Banja Luka, Republic of Srpska, Bosnia and Herzegovina, approved the study and informed consent was obtained from all individual respondents. The research was conducted according to the Declaration of Helsinki.

Conflicts of interest. The authors declare no conflict of interest.

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Razvoj hospitalizovanih slučajeva COVID-19 sa posebnim osvrtom na prvu godinu pandemije: iskustvo Univerzitetskog kliničkog centra Republike Srpske

Nataša Janjić[1,2,4], Goran Bokan[1,3,4], Uroš Kalajdžić[2], Antonija Verhaz[1,3], Slavica Zeljković[3], Zoran Mavija[1,3]

[1]Univerzitet u Banjoj Luci, Medicinski fakultet, Banja Luka, Republika Srpska, Bosna i Hercegovina

[2]Opšta bolnica „Sveti apostol Luka", Doboj, Republika Srpska, Bosna i Hercegovina

[3]Univerzitetski klinički centar Republike Srpske, Banja Luka, Republika Srpska, Bosna i Hercegovina

[4]Univerzitet u Istočnom Sarajevu, Medicinski fakultet Foča, Foča, Republika Srpska, Bosna i Hercegovina

Uvod. Infekcija uzrokovana novim koronavirusom (SARS-CoV-2) pojavila se 2019. godine u Kini i brzo se proširila širom svijeta. Ovaj izrazito zarazan virus prenosi se prvenstveno respiratornim kapljicama i može dovesti do teškog akutnog respiratornog sindroma (SARS). Svjetska zdravstvena organizacija (SZO) proglasila je bolest koronavirus 2019 (COVID-19) globalnom pandemijom 11. marta 2020. godine. Ova studija analizira pacijente hospitalizovane u Univerzitetskom kliničkom centru Republike Srpske (UKC RS) tokom prvih dvanaest mjeseci pandemije.

Metod. Podaci svih pacijenata sa laboratorijski potvrđenom infekcijom SARS-CoV-2, dijagnostikovanom metodom lančane reakcije polimeraze sa reverznom transkripcijom u realnom vremenu (RT-PCR), prikupljani su u periodu od marta 2020. do marta 2021. godine. Pacijenti su analizirani prema starosti, polu, težini kliničke slike, trajanju hospitalizacije i ishodu liječenja.

Rezultati. Godinu dana nakon potvrde prvog slučaja COVID-19 u Republici Srpskoj, hospitalizovano je ukupno 5 956 pacijenata pozitivnih na COVID-19, od kojih su 3 662 bili muškarci, a 2 294 žene. Prosječno trajanje hospitalizacije iznosilo je 9 dana, uz statistički značajnu razliku u dužini hospitalizacije među različitim klinikama (p=0,001). Najzastupljeniju starosnu grupu činili su pacijenti stariji od 60 godina. Tokom posmatranog perioda, oporavilo se 84,53% pacijenata, dok je 15,47% preminulo. Najčešći komorbiditeti bile su kardiovaskularne bolesti (24,71%).

Zaključak. Muški pacijenti su bili češće hospitalizovani u odnosu na ženske, uz statistički značajne razlike u polnoj zastupljenosti uočene samo u Klinici za anesteziju i intenzivno liječenje (p< 0,05). Pacijenti stariji od 60 godina bili su podložniji razvoju teških komplikacija i smrtnog ishoda, uz dominaciju muškog pola.

Ključne riječi: korona virus, COVID-19, pandemija, bolničko liječenje, ishod