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PARTICULARITIES OF THE MANAGEMENT OF MEDICAL SERVICES IN THE OBSTETRICS GYNECOLOGY DEPARTMENTS IN THE CONTEXT OF THE COVID-19 PANDEMIC

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ABSTRACT

The coronavirus pandemic influenced the way medical care was provided, in ambulatory and hospital environment.

We analysed of the situation on the Obstetrics-Gynecology section of the Emergency County clinical Hospital „Saint Andrew the Apostle" in Constanta, for a period of two years, regarding the protocol of pregnant patients, gynecopats and shoots infected with Covid-19, measurement of hospital costs, prevention and limitation measures against the infection of medical personnel with the above-mentioned virus.

Keywords: COVID-19, management, obstetrics ward

Introduction

The coronavirus pandemic in the world is an ongoing epidemic caused by SARS-CoV2, a virus that causes an infection called COVID-19, which can be asymptomatic, moderate or severe. Severe infection includes atypical pneumonia, clinically manifested by acute respiratory distress syndrome (1). Worldwide, 529 million confirmed cases of coronavirus have been reported, of which 6,29 million were deaths (2).

From a clinical point of view, any person who shows at least one of the following signs and symptoms (non-productive cough; fever; shortness of breath; sudden onset of anosmia, ageusia or dysgeusia) is likely to be infected with SARS CoV2 (3). The diagnosis of Covid-19 is confirmed by biological sampling: RT-PCR and by specific radiological evidence of lesions compatible with Covid-19.

Pending confirmation or disconfirmation of the diagnosis of Covid-19, persons who show suggestive signs and symptoms specific to the case definition will be isolated in isolation zones of the sanitary unit or in spaces specially designated for patients with Covid-19.

Both pregnant patients and gynecological patients have a low immune system, being part of the category of patients with a higher,

implicitly higher risk of becoming infected with this Covid-19 virus and worsening of the general condition until exitus (4).

The World Health Organization (WHO) has approved anti-Covid-19 vaccines in pregnant women at all stages of pregnancy, considering them safe, effective, and there is no increased risk of pregnancy complications, miscarriage, or infertility. The benefits of vaccination far outweigh any potential risks (5).

We analysed of the situation on the Obstetrics-Gynecology section of the Emergency County clinical Hospital „Saint Andrew the Apostle" in Constanta, for a period of two years, regarding the protocol of pregnant patients, gynecopats and shoots infected with Covid-19, measurement of hospital costs, prevention, and limitation measures against the infection of medical personnel with the above-mentioned virus.

The aim of the research was to identify the the influence of the SARS-CoV2 virus on the number of admissions (pregnant women, gynecopaths, confinement), the evaluation of costs for additional investigations and specialized treatment, so that we can know how to use resources and how efficient to use them. Also we analysed the prevalence of preterm births and abortions during the Covid-19 pandemic.

Material and methods

The study materials used were the observation sheets of the patients admitted to the Obstetrics Gynecology departament of SCJU Constanta, between March 2020 and April 2022.

The study group included 44 patients confirmed with the diagnosis of Covid19 associated with the underlying pathology, ages ranging from 18 years to 82 years, female.

The working method is indirect by: Collecting individual data from various documents (observation sheet, consultation sheet); register of OG Covid-19.

Clinical data at patient level from the general clinical observation sheet are:

- Number of the general clinical observation sheet
- Date of admission
- Type of discharge (discharged on demand/ discharged/ transferred)
- Age
- Number of days of hospitalization
- Number of days ATI
- Diagnosis at discharge
- Cost measurement per patient Covid-19

Through Microsoft Excel, previously stated statistical data was electronically introduced, thus constituting the initial database, from which the significant objectives of this study were processed.

We have produced tables and figures on objective results: the share of pregnant women, gynecopaths and confinement , the number of interns during the pandemic vs. Previous years, the average age of patients infected with Covid-19, the average days of hospitalization, expenses per patient Covid-19 + and per days of hospitalization vs. Patient with the same non-covid diagnosis.

Results and Discussions

Table 1 Evolution of the admissions

The year	Number of admission	Number of positive Covid-19 patient admissions	Number of deaths OG wards
2017	7106	0	12
2018	7526	0	6
2019	7316	0	6
2020	6565	9	1
2021	6520	12	8

Following the 5-year research of the registries, I found that the total number of admissions in the Obstetrics-Gynecology section decreased in the years when the Covid-19 pandemic appeared, even with 1000 cases. Increased oxygen requirements in intensive care prompted surgeons to perform only surgical emergencies, which is why chronic operations were delayed. However, administration of high-flow supplemental oxygen should be avoided due to concerns about aerosol generation (6).The number of births increased during the Covid-19 pandemic, while in 2018 there were 3.465 vaginal and cesarean deliveries, the number reached 3.537 in 2020 and 3.512 deliveries in 2021.

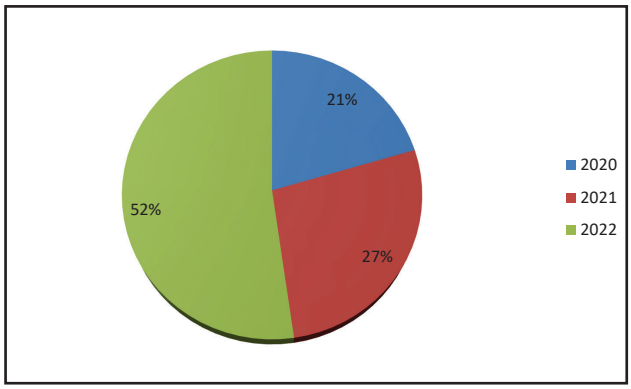


Figure 1 Patients admitted to Covid-19 positive from Obstetrics Gynecology departments

During the Covid-19 pandemic, 44 patients in Obstetrics-Gynecology departments were confirmed since March 2020, with a total of 227 days of admissions, of which a total of 74 days of intensive care, but no complicated deaths from Covid-19 infection.

Specific to the decision-making process is the inevitability of risks. It is necessary to know the risks involved in order to reduce them to a minimum (7). Management of the OG departaments on pandemic situation was the realization of a separate route of pregnant/ gynecological patients tested positive with rapid test Covid-19 antigen, their isolation from the rest of the patients, in special reserves (isolators) and interhospital transfer to Covid support hospitals (Medgidia), after confirmation of the RT-PCR test (8).

During hospitalization, visitors are restricted to avoid self-contamination. If the anti-Covid protocol is not followed, the epidemiological risk of exposure is higher.

Table 2 Admission for patients with COVID-19

Obstetrics Gynecology departments	Number (absolute frequency)	Proportion (relative frequency)
Gynecology	18	41%
Maternity	17	39%
Confinement	9	20%
Total	44	100%

Out of 44 positive cases of Covid-19, 20% were admitted to the confinement department, 39% were admitted to the pregnant sector and 41% were admitted to the Gynecology sector.

Another objective of the dissertation paper was to evaluate costs per patient and per day of hospitalization, to know how to use resources and how efficient to use them.

In the pregnant department, for the diagnosis: "Supervision of another normal pregnancy" there was an increase in the number of cases from 2019 (non-Covid year) -78 cases vs 2021 (pandemic year) -140 cases, of which 3 patients confirmed positive Covid-19, one of the reasons being the state of emergency, in which families were advised to stay in the house or work from home, these measures led to increased natality.

The average cost per patient in a non-covid year (2019) for this diagnosis was 856 lei vs 940 lei in 2022, as the average length of hospitalization at the OG section level increased from 2.35 to 3.51. The average cost per day of hospitalization also increased from 364 lei (2019) to 443 lei (2022).

Pregnant women are a vulnerable group with a high risk of severe infection with COVID-19 due to physiological changes in their immune status (9). On the confinement sector, for the diagnosis: "Haemorrhage after childbirth" there was an increase in the number of cases from 2019 (non-Covid year) - 802 cases vs year 2020 (pandemic year) - 1113 cases, of which 4 patients confirmed positive Covid-19. The average cost per patient in a non-vacuum year (2019) for this diagnosis was 1540 lei vs 1433 lei in 2020, as the average length of hospitalization at the OG section level also decreased from 4,70 to 4,06. The average cost per day of hospitalization also increased from 327 lei (2019) to 353 lei (2020).

The trend seen for breast cancer is also present in cervical cancer (10). In the Gynecology sector, for the diagnosis: "Malignant cervical tumor, without specification" there was an increase in the number of cases in 2019 (non-Covid year) -73 cases vs year 2021 (pandemic year) -78 cases, of which 2 patients confirmed positive Covid-19. There was expected to be a 60% increase in cervical cancers between 2020 and 2022, leading to an increase in long-term cervical cancer mortality, morbidity, or both. The average cost per patient in a non-vacuum year (2019) for this diagnosis was 2708 lei vs 2419 lei in 2021, as the average length of hospitalization at the OG section level also decreased from 6,19 to

5,60. The average cost per day of hospitalization also increased from 437 lei (2019) to 431 lei (2021).

Table 3 Discharging of patients with COVID-19

Situation at discharge	Number of cases
Discharge	25
Discharged on request	3
Transfer to another hospital	16
Total Covid-19 positive cases	44

Of the total admissions, 57% of the cases, were discharged from the Obstetrics-Gynecology department SCJU CT, 7% of the patients requested discharge on request contrary to the medical opinion, after being explained the risks they are exposed to and understood. 36% of cases were transferred to Covid support hospitals in Medgidia .

Conclusions

These presentations demonstrate the impact of Coronavirus on the specialty Obstetrics-Gynecology, although there were many interns with rapid tests Covid-19 positive, only 44 cases were confirmed by the RT-PCR test in the period 2020-2021.

There has been no death from this Covid-19 infection, although pregnant and gynecological patients have a lower immune system.

There were no more preterm births or abortions during the study period. In contrast, there were 3 cases of patients infected with Covid-19 who experienced the death of the intrauterine fetus.

The average age of patients infected with Covid-19: is 39 years

Average days of hospitalization: 5 days.

Patient expenses Covid-19 vs. Patient with the same non-covid diagnosis: There were no large differences in additional expenses for patients confirmed Covid-19.

Interhospital transfer: Out of 44 Covid-19 cases, 16 were transferred to a Covid support hospital, Medgidia. (48% of cases)

The number of interns has decreased compared to previous years, as chronic operations have stopped. Increased oxygen demand in intensive care has led surgeons to perform only surgical emergencies.

Improving the performance of the Obstetrics-Gynecology clinical section and improving the efficiency of hospital care by increasing ICM and monitoring the Covid-19 cases with the follow-up of their final validation, in order to obtain the amounts allocated in accordance with the legislation in force.

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