

Case ReportDOI: <https://doi.org/10.47275/2692-0948-110>
Volume 1 Issue 2

Clinical Characteristics of Two Gynecologic Cancer Patients on Treatment Infected with SARS-CoV-2 Infection in Jimma, Ethiopia

Tafese DJ*, Woubishet G, and Fanta A

Department of Obstetrics & Gynecology, Jimma University Medical Center, Jimma, Ethiopia

Abstract

Background: The outbreak of coronavirus disease 2019 (COVID-19) emerged in late 2019 in Wuhan, China, and has been spreading rapidly. As the infection has become widespread, concern for the influence of COVID-19 on patients with cancer has grown. Individuals with cancer, particularly those who are receiving systemic anticancer treatments, have been postulated to be at increased risk of mortality from COVID-19 due to highly immunosuppressive chemotherapy regimens and possible exposure to COVID-19 during the treatment. In these case reports, we aimed to discuss the outcome of patients with gynecologic cancers on management with COVID-19.

Case presentation: We present the clinical features of two cancer patients who were infected with SARS-CoV-2 in late June 2020 in our hospital. Case one was a 23 years old patient diagnosed to have stage IIIC malignant ovarian tumor who was on neoadjuvant chemotherapy (Cisplatin and Paclitaxol) infected with COVID-19. Case two was 36 years old patient diagnosed to have stage 1b1 squamous cell cervical carcinoma for whom type 3 radical hysterectomy and pelvic lymphadenectomy was done. She was asymptomatic and she was tested and became positive after she had contact history with COVID-19 positive patient. Both survived from the viral infection. They acquired SARS-CoV-2 infection during their staying in hospital under chemotherapy and surgery of the tumor.

Conclusion: Chemotherapy or surgical management for gynecologic cancer is not linked to higher COVID-19 mortality risk. So, patients should not only continue to receive their screening and preventive measures but also continue with active therapy for cancer, such as surgery and chemotherapy, to optimize their cancer outcomes.

Keywords: COVID-19; Advanced Stage Ovarian Cancer; Neoadjuvant Chemotherapy; Type III Radical Hysterectomy; Cervical Cancer

***Correspondence to:** Tafese Dejene Jidha, Department of Obstetrics & Gynecology, Jimma University Medical Center, Jimma, Ethiopia; E-mail: dejtafese@gmail.com

Citation: Tafese DJ, Woubishet G, Fanta A (2020) Clinical Characteristics of Two Gynecologic Cancer Patients on Treatment Infected with SARS-CoV-2 Infection in Jimma, Ethiopia. *J Womens Health Care Manage*, Volume 1:2. 110. DOI: <https://doi.org/10.47275/2692-0948-110>.

Received: November 19, 2020; **Accepted:** December 07, 2020; **Published:** December 12, 2020

Background

In December 2019, a cluster of cases of pneumonia was reported by Wuhan Municipal Health Commission, China, and then a novel coronavirus was eventually identified [1]. The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is highly infectious and can infect all individuals. As of 28 August 2020, 213 Countries and Territories around the world have reported a total of 24,809,018 confirmed cases of the coronavirus COVID-19 and a death toll of 838,799 deaths. Deaths from COVID-19 have been caused by multiple organ dysfunction syndrome rather than respiratory failure [2], which might be attributable to the widespread distribution of angiotensin converting enzyme 2-the functional receptor for SARS-CoV-2-in multiple organs [3]. Risk factors for severe outcomes and death from COVID-19 infection include older age and medical comorbidities, characteristics that are common in cancer patients. It was postulated that patients with cancers were more susceptible to infection than individuals without cancer because of their systemic immunosuppressive state caused by the malignancy and anticancer

treatments, such as chemotherapy or surgery. Therefore, these patients might be at increased risk of COVID-19 and might have a poorer prognosis. Here, we report on 2 gynecologic cancer patients infected with SARS CoV-2 in late June of 2020 and describe their clinical diagnosis, management and outcomes.

Case Presentation**Case One**

A 23 years old para one patient was admitted to the department of Gynecology and obstetrics on April 17, 2020 after she came with the complaints of a gradually increasing huge abdominal swelling which she noticed 8 months back. The swelling was accompanied with dull aching pain in the lower back. She also complained of breathlessness, insidious in onset, which worsened on recumbency leading to decreased sleep. She had the sensation of fullness of abdomen, leading to decreased appetite. There was a history of generalized weakness. There was no family history of malignancies. The patient had no history of the previous medial or surgical illnesses. Despite all these symptoms,



the patient did not seek for medical attention earlier owing to lack of money. Her husband brought her to hospital after she started having loss of appetite and worsening of breathlessness.

Clinical examination revealed emaciated afebrile with a pulse rate of 124 b/min, blood pressure of 100/65 mm Hg and respiratory rate of 26 cycles/min. Abdominal examination revealed a giant mass filling the pelvis and abdominal cavity (reaching the level of navel), causing distension of the abdominal wall. Abdominal ultrasound examination revealed that the tumor filled the pelvic and abdominal cavity, approximately 28 cm in diameter which was multilocular-solid tumor with cysts filled with anechoic (Figure 1). The most possible origin of the tumor was the ovary. The uterus was visible and had normal size. Moderate blood flow in the solid components of the tumor was detected using Doppler ultrasound. In ultrasound examination, the liver grossly looked normal but both kidneys had moderate bilateral hydronephrosis and fluid collection in peritoneal cavity. Chest X-ray showed right side pleural effusion. Serum tumor markers and biochemistry were done and presented in table 1. She had ECOG performance status of 2. Risk of malignancy index-2(RMI-2) was 1,268 which revealed high likely to be malignant.

Pleural fluid cytology was done and the smear showed reactive effusion and negative for malignancy. Ultrasound guided FNAC of the mass was also done and the smear showed high grade malignant cells.

She was admitted to the hospital with a decision to start neoadjuvant chemotherapy in view of advanced stage malignant ovarian tumor and started on Paclitaxel and carboplatin. 5 days after she took the second cycle of chemotherapy, she developed sore throat and dry cough. Following national guidance during COVID-19 pandemic, the patient was tested for SARS-CoV-2 and the PCR was positive. The patient was then transferred to a COVID treatment center for follow up and treatment. During her stay in treatment center no worsening of symptoms. Two weeks after admission to the center, two subsequent PCR tests for SARS-CoV-2 performed 24 hours apart were negative and the patient was discharged. Three weeks post discharge the patient returned to the hospital for evaluation. The patient was afebrile since

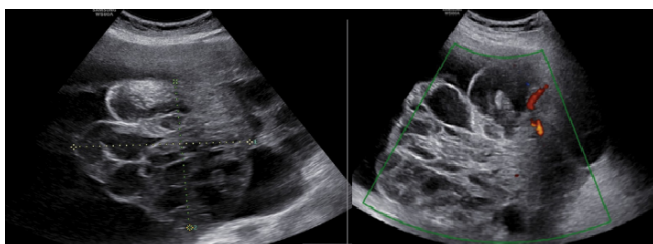


Figure 1: Multilocular-solid tumor with cysts filled with anechoic which had moderate blood flow in the solid components of the tumor.

Table 1: Serum Tumor Markers and Biochemistry Results.

Laboratory tests	Result
Hematocrit	0.376
Blood group and Rh	O positive
Creatinine	0.56 mg/dl
Total serum bilirubin	0.24 mg/dl
Direct bilirubin	0.109 mg/dl
GOT	69.4 U/L
GPT	8.3 U/L
CA-125	317.01 U/L
B-HCG	136.68 Miu/ml
CEA	<1.00 ng/ml

her discharge and she only complained for abdominal discomfort which was attributed to ovarian cancer. Complete blood count, liver and renal function tests were done and the values were unremarkable, performance status was ECOG grade 2, chemotherapy resumption was decided and the patient resumed paclitaxel and carboplatin treatment. Currently, she has received 4 cycles every 3 weeks without any significant toxicity.

Case Two

A 36-year-old woman presented at our hospital complaining of irregular vaginal bleeding of 2 months. Gynecologic pelvic examination revealed lesion on anterior lip of cervix which measured 1.5 cm. Parametria and pelvic side walls were free. A cervical biopsy was performed that revealed an invasive, poorly differentiated, squamous cell carcinoma. Abdominal ultrasonographic examination was unremarkable. She was diagnosed to have stage 1b1 cervical cancer. Her performance status was ECOG grade 1. It was decided for surgery and type III radical hysterectomy (according to Piver classification) (Figure 2) plus pelvic lymphadenectomy were performed. Three days after her surgery, she was tested for COVID-19 with nasopharyngeal swab RT-PCR testing and found to be positive. She was tested for COVID-19 because she had contact with a patient in the same ward who had cough and tested positive. She was transferred to COVID-19 treatment center. She stayed in the treatment center for 2 weeks. During her stay, she had no symptoms. Two weeks after admission to the center, two subsequent PCR tests for SARS-CoV-2 performed 24 hours apart were negative and the patient was discharged. A week post discharge, the patient returned to the hospital for evaluation with histologic report which revealed a poorly differentiated cervical carcinoma and negative pelvic lymph nodes. No further adjuvant treatment was proposed.

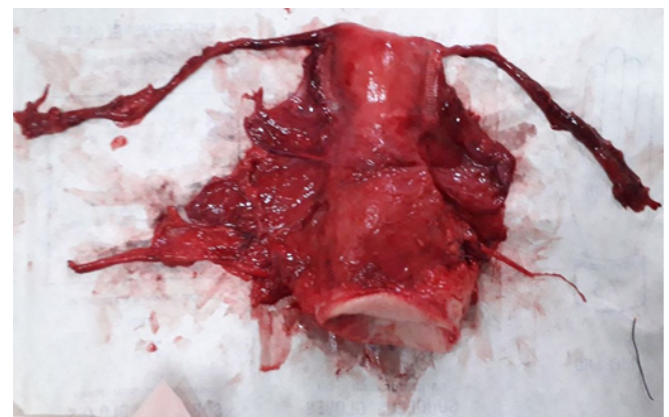


Figure 2: Surgical specimen of uterus and parametria after radical hysterectomy.

Discussion

In these case reports, we presented clinical data of two cancer patients who were infected by SARS-CoV-2 and developed COVID-19. The diagnosis of COVID-19 was based on symptoms and contact tracing and detection of the virus by real-time RT-PCR in nasopharyngeal swab samples from the patients.

Initial reports out of china that showed increased severity and risk for death associated with COVID-19 among patients undergoing cancer therapy and surgery. Patients with cancer receiving systemic anticancer treatments have been generally assumed by many to be at a higher risk from the disease than their counterparts are who



are not receiving anticancer treatment. The evidence to support this claim is scarce and limited to retrospective series. The promulgation of this hypothesis has led to widespread global changes to patterns of prescribing chemotherapy and anticancer treatment [4]. Liang W, et al. (2020) [5], found that patients with cancer might have a higher risk of COVID-19 than individuals without cancer. Additionally, they showed that patients with cancer had poorer outcomes from COVID-19, providing a timely reminder to physicians that more intensive attention should be paid to patients with cancer, in case of rapid deterioration [5]. COVID-19 patients with cancer had higher risks in all severe outcomes [6]. Patients with hematologic cancer, lung cancer, or with metastatic cancer (stage IV) had the highest frequency of severe events. Patients with nonmetastatic cancer experienced similar frequencies of severe conditions to those observed in patients without cancer. It was also thought that patients who received surgery had higher risks of having severe events, whereas patients who underwent only radiotherapy did not demonstrate significant differences in severe events when compared with patients without cancer.

A prospective cohort study found that mortality from COVID-19 in cancer patients appears to be principally driven by age, gender, and comorbidities [4]. They were not able to identify evidence that cancer patients on cytotoxic chemotherapy or other anticancer treatment are at an increased risk of mortality from COVID-19 disease compared with those not on active treatments. They suggested that continuing to shield patients with cancer from exposure to SARS-CoV-2 is important, through self-isolation, safely minimizing the number of hospital visits (which might mean a substitution of oral drugs in place of intravenous drugs), avoiding the mixing of COVID-19-negative and COVID-19-positive work streams within the hospital environment, and by mitigating the risk of neutropenia to avoid the risk of simultaneous COVID-19 and bacterial septicemia. They concluded that withholding effective cancer treatments from many cancer patients during the pandemic runs the very real risk of increasing cancer morbidity and mortality, perhaps much more so than COVID-19 itself.

A study published in cancer indicated that women in New York City receiving standard treatment for gynecologic cancer are not at increased risk of being hospitalized for or dying from coronavirus disease 2019 (COVID-19) due to their cancer and neither having cancer nor receiving treatment for it worsened COVID-19 outcomes [4]. Factors which overall double women's risk of dying from COVID-19, are being African-American or having two or more underlying health conditions, such as hypertension, obesity, and diabetes.

A study involving a small number (eight of 121) of participants receiving recent immunotherapy, drugs that harness the immune system to attack cancer cells, were three times more likely to die than women who were receiving standard radiation, surgery, chemotherapy, or a combination of these therapies [8]. However, the cautions that the number of women receiving immunotherapy was not large enough to lead to any firm recommendations about clinical care or to result in any firm conclusions about clinical care. Recent major surgery was not predictive of COVID-19 severity or mortality. Having late-stage gynecologic cancer, cancer surgery, or high-dose chemotherapy also did not increase a woman's risk of dying from COVID-19. It was found that 75 percent of gynecologic cancer patients with COVID-19 had a mild form of the disease and recovered from their infection [8]. These patients already contend with increased inflammation and imbalanced immune systems that, in theory, coronavirus infection could make worse. In our cases, the patient with stage IIIC ovarian cancer had mild COVID infection symptoms and the patient with stage 1b1 cervical

cancer had no symptoms and she was tested based on contact tracing. Both patients were younger in age and had no medical comorbidities.

It is known that severe and critically ill COVID-19 patients are characterized by a hyper-inflammation response [9]. Cancer, major surgeries and chemotherapy induce an immunosuppressive state which could counterbalance the hyper inflammatory response associated with severe coronavirus disease and lead to a milder course [10]. However further studies are needed to provide further insight for the exact role of cancer, surgery and chemotherapy in the clinical outcome of COVID-19.

The chemotherapy treatment itself does not appear to cause additional adverse outcomes from having COVID-19. It is important for patients to seek cancer therapy and not delay, as it has been seen patients delay care and present at more advanced stages. With respect to myelosuppressive regimens and the risk of lymphopenia and neutropenia, no association between lymphopenia and disease severity was observed [4]. Overall, the study findings support the safety of continued cancer treatment during the pandemic, though it is indicated that immunotherapy treatment should be administered with discretion. In our case, the patient with stage IIIC ovarian cancer was on her fifth day after she took the 2nd cycles of neoadjuvant chemotherapy (paclitaxel and carboplatin regimens) when she was infected with COVID-19. Both drugs are myelosuppressive drugs, but blood cells were in normal range during follow after treatment with the drugs.

Because the COVID-19 pandemic is not expected to subside for some time, this may help to alleviate patients' fears and allow them to feel safe in continuing critical cancer treatments, including surgery and cancer-directed therapy. It should be reassuring for women with gynecologic cancers who are worried that having cancer increases their risk of becoming seriously ill if they go to the hospital because of COVID-19. It is important for counseling patients with gynecologic cancer that standard cancer treatments do not seem to increase the risk of hospitalization or death due to COVID-19.

Our cases add to previous series indicating that actively treated cancer patients did not increase risk of dying from COVID-19 infection. It also suggests that younger in age, good performance status and absences of medical comorbidities could serve as possible indicators of good prognosis. Further studies will confirm the validity of these findings.

Conclusion

Chemotherapy or surgical management for gynecologic cancer is not linked to higher COVID-19 mortality risk. So, patients should not only continue to receive their screening and preventive measures but also continue with active therapy for cancer, such as surgery and chemotherapy, to optimize their cancer outcomes.

Competing Interests

The authors of this case report declare that they have no competing interests.

Consent

Written informed consent was obtained from the patient's next of kin for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.



Authors' Contributions

Jidha TD did the literature review and prepared the manuscript. Girma W and Assefa F were involved in the literature review and manuscript preparation, made the final corrections, and approved the manuscript. All authors read and approved the final manuscript.

References

- Hui DS, Azhar EI, Madani TA, Ntoumi F, Kock R, et al. (2020) The continuing 2019-nCoV epidemic threat of novel coronaviruses to global health - The latest 2019 novel coronavirus outbreak in Wuhan, China. *Int J Infect Dis* 91: 264-266. <https://doi.org/10.1016/j.ijid.2020.01.009>
- Wang C, Horby PW, Hayden FG, Gao GF (2020) A novel coronavirus outbreak of global health concern. *Lancet* 395: 470-473. [https://doi.org/10.1016/S0140-6736\(20\)30185-9](https://doi.org/10.1016/S0140-6736(20)30185-9)
- Hamming I, Timens W, Bulthuis ML, Lely AT, Navis GV, et al. (2004) Tissue distribution of ACE2 protein, the functional receptor for SARS coronavirus. A first step in understanding SARS pathogenesis. *J Pathol* 203: 631-637. <https://doi.org/10.1002/path.1570>
- Lara OD, O'Cearbhaill RE, Smith MJ, Sutter ME, Knisely A, et al. (2020) COVID-19 outcomes of patients with gynecologic cancer in New York city. *Cancer* 126: 4294-4303. <https://doi.org/10.1002/cncr.33084>
- Liang W, Guan W, Chen R, Wang W, Li J, et al. (2020) Cancer patients in SARS-CoV-2 infection: a nationwide analysis in China. *Lancet Oncol* 21: 335-337. [https://doi.org/10.1016/S1470-2045\(20\)30096-6](https://doi.org/10.1016/S1470-2045(20)30096-6)
- Dai M, Liu D, Liu M, Zhou F, Li G, et al. (2020) Patients with cancer appear more vulnerable to SARS-CoV-2: A multicenter study during the COVID-19 outbreak. *Cancer Discov* 10: 783-791. <https://doi.org/10.1158/2159-8290.CD-20-0422>
- Lee LY, Cazier JB, Starkey T, Turnbull CD, Team UC, et al. (2020) COVID-19 mortality in patients with cancer on chemotherapy or other anticancer treatments: a prospective cohort study. *Lancet* 395: 1919-1926. [http://dx.doi.org/10.1016/S0140-6736\(20\)31173-9](http://dx.doi.org/10.1016/S0140-6736(20)31173-9)
- PR newswire (2020) Most women treated in New York city for gynecologic cancers are not at increased risk of death from COVID-19. New York, United States.
- Giamarellos-Bourboulis EJ, Netea MG, Rovina N, Akinosoglou K, Antoniadou A, et al. (2020) Complex immune dysregulation in COVID-19 patients with severe respiratory failure. *Cell Host Microbe* 27: 992-1000.e3. <https://doi.org/10.1016/j.chom.2020.04.009>
- Liontos M, Kaparelou M, Karofylakis E, Kavatha D, Mentis A, et al. (2020) Chemotherapy resumption in ovarian cancer patient diagnosed with COVID-19. *Gynecol Oncol Rep* 33: 100615. <https://doi.org/10.1016/j.gore.2020.100615>