Received: 19 October 2020 | Revised: 22 October 2020 | Accepted: 4 November 2020

DOI: 10.1002/ijgo.13470

Gynecology

Increased anxiety and depression in patients with gynecologic cancers during the COVID-19 pandemic: A retrospective study from Japan

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Keywords
Anxiety, COVID-19, Depression, Gynecologic cancer

Patients with cancer frequently have problems related to anxiety or depression.[1] With the insurgence of the coronavirus disease 2019 (COVID-19) pandemic, fear and uncertainty have increased in the general population. Moreover, with the widespread media information that cancer can be a risk factor for severe COVID-19, anxiety tends to increase in patients with cancer. Additionally, the decrease in face-to-face communication with their peers can predispose them to depression.

We conducted a Yokohama City University IRB-approved retrospective study, wherein we included patients from our hospital with gynecologic cancers who had been screened for anxiety and depression during the Japanese government-ordered state of emergency against COVID-19. We used self-administered questionnaires of Distress and Impact Thermometer (DIT)[2] and Hospital Anxiety and Depression Scale (HADS).[3,4] The data were analyzed using GraphPad Prism 8 (GraphPad Software, San Diego, CA, USA).

The participants were all patients with gynecologic cancers in May 2020. We obtained results from 34 patients, 12 of whom visited for post-treatment follow-up and 22 undergoing treatment (Table 1). A significantly greater proportion of patients with ovarian and peritoneal cancer, as well as advanced-stage cancers, were undergoing treatment compared to the post-treatment group. The DIT and HADS anxiety scores were higher in patients undergoing treatment than in the follow-up group. One third of the patients undergoing cancer treatment showed a significantly high anxiety score. Surprisingly, 50% of patients showed a high depression score in both groups, which was higher than the proportion in a previous study.[1] Patients who were tested at least

TABLE 1 Basic clinical characteristics with DIT and HADS scores for patients post-treatment (OFF) and undergoing cancer treatment (ON)

Clinical characteristics	OFF (n = 12)	ON (n = 22)	*P*
Age (years)			
<40	0 (0%)	0 (0%)	
40–49	0 (0%)	3 (14%)	
50–59	5 (42%)	8 (36%)	
60–69	6 (50%)	5 (23%)	
70–79	0 (0%)	6 (27%)	
≧80	1 (8%)	0 (0%)	0.21
Cancer type			
Cervical cancer	2 (17%)	2 (9%)	
Endometrial cancer	7 (58%)	8 (36%)	
Ovarian cancer	3 (25%)	10 (45%)	
Peritoneal cancer	0 (0%)	2 (9%)	0.21
Stage			
I	8 (67%)	12 (55%)	
II	1 (8%)	2 (9%)	
III	3 (25%)	6 (27%)	
IV	0 (0%)	2 (9%)	0.03
Chemotherapy			
No	3 (25%)	2 (9%)	
Yes	9 (75%)	20 (91%)	0.56

(continues)

TABLE 1 (Continued)

Clinical characteristics	OFF (n = 12)	ON (n = 22)	*P*
DIT			
Distress ≧ 5	3 (25%)	8 (38%)	0.44
Impact ≧ 5	2 (17%)	6 (29%)	0.44
HADS			
Anxiety ≧ 8	2 (20%)	7 (33%)	0.44
Depression ≧ 8	5 (50%)	9 (43%)	0.70

Abbreviations: DIT, Distress and Impact Thermometer; HADS, Hospital Anxiety and Depression Scale.

three times expressed a recovering trend by the end of the state of emergency.

Our study has some limitations. Due to the possible selection bias, the results cannot be generalized. Moreover, the sample size was small; therefore, we could not rule out possible confounding factors such as origin and stage of cancer.

In Japan, the first wave of the pandemic was not as enormous as that in other developed countries. Nevertheless, this study revealed anxiety and depression in a high proportion of patients with cancer. This might be due to the number of planned visits of patients with cancer, which did not considerably decrease in our hospital.

In summary, during the first wave of the COVID-19 pandemic in Japan, 50% of patients with cancer were depressed, and many patients who were undergoing cancer treatment were distressed and anxious. Further careful psychological evaluation of patients with cancer will be required during the next wave of the pandemic.

ACKNOWLEDGEMENTS

The authors thank Dr Shin Saito and Dr Yukiko Okada for their substantial support.

CONFLICTS OF INTEREST

The authors have no conflicts of interest.

AUTHOR CONTRIBUTIONS

TM, EO, NK, AS, EM, and HS conceived and designed the study and wrote the manuscript. TM, EO, and MA collected data. TM planned and conducted the study and performed data analysis.

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