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Clinical Presentation of Sudanese Ovarian Cancer women

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Abstract: *Ovarian cancer(OC) is the seventh most common cancer, and it is the most common cause of mortality from gynecological cancers worldwide, In developing countries, it is ranked the second most common gynecological cancer, and constitutes the fourth most common of all cancers in women . aim to explain patterns of geographical and demographical data of OC among Sudanese women. A total of 85 ovarian cancer patient age range (20 to 80) years old in their different stage , grade and type of the d isease attending oncology clinics in National Cancer Registry for Gazira State from different gynecological clinics in Sudan were included in this review study. . The study will be conducted from february 2020 to July 2022. (used avalidated questionnaire) contain 1. Socio demographic characteristics, 2. Patient clinical data, 3. Diagnostic data, 4. Lifestyle factors. data analysis by SPSS and Chi -square test. Overall,85 Ovarian cancer patients attending National Cancer Institute. Majority of the ovarian cancer patients were in the age group of <50 years representing 66%, and 34% in age group >50 years. The mean and median age was with age means (55.44) and (56) respectively. , The sample population was divided into four aged groups including (5.9%) for age group (20 to 35 years), (28.2%) for age group (36 to 50 years), (37.6%) for age group (51 to 65 years), and (28.2%) for age group (66 to 80 years). 68 percent of the participants were from Gezira state and 31 percente from other Urban Areas in sudan. Eighy eight percent haven 't family history and 12 percent have family history and 60 percent hereditary from first Degree . Majority of the ovarian cancer patients were at FIGO Stage between (I to III) which account fivty one percent; while the remaining 28 percent and 21 percent were in II and 1 FIGO Stage respectively .Ninety percent of ovarian cancer patients were diagnosed with serous carcinoma , 8 percent were mucinous carcinoma and 2 percent were clear cell carcinoma. 35% from patients diagnosed in grad III , 33% in grad II and 32% in grad I. Conclusion of the present study main age of patients with ovarian cancer (51 - 65), majority of patients from rural areas, about 50% of patients johayna tribe, risk factor of family history very important for early detection serous car cinoma type is the most common histological type of ovarian cancer, stage III is more present among patients.*

Keywords: ovarian cancers, demographic data, Clinical data, Sudan

Introduction

Ovarian cancer is one of the most common gynecological cancers worldwide, with a high mortality rate. Early-stage disease has no definite symptoms. As a result, approximately two-,thirds of patients are diagnosed with advanced-stage ovarian cancer. Early detection and diagnosis of ovarian cancer would result in a 95% 5-year survival rate (1).. According to the latest Global Cancer Observatory (GLOBOCAN) report, OC accounted for 1.6% of all cancers and 2.1% of all cancer deaths worldwide in 2020 .(2). Based on demographic predictions by HDI category, the number of new cases and fatalities were anticipated for the year 2040. .(3) . North Africa has the lowest rate of occurrence, It is the second most common gynecological cancer in developing countries and the fourth most common cancer in women overall.(4). In Sudan the most prevalent cancers in Sudanese women are breast cancer, cervical cancer, and ovarian cancer. According to GLOBOCAN 2020, the incidence rates for breast, cervical, and ovarian cancer among women in Sudan were 41.2, 8.7, and 6.7 per 100,000, resp ectively. The GLOBOCAN data, however, is based on information from the Federal Ministry of Health (FMOH). As most informa tion originates from hospital
based registries and Sudan lacks a functioning national cancer registry, it is unknown how common cancer is throughout the entire nation. (5)

Ovarian cancer many different histological subtypes. up to 90% of all OC are epithelial in origin, with the remaining OC being non-epithelial in origin. 3% of epithelial OC are mucinous, while the rest are non-mucinous. Non-mucinous carcinomas are further classified as serous (70% of non-mucinous), endomterioid (10%), clear cell (10%), and unspecified (5%). Serous carcinomas are further classified as high grade and low grade. Non-epithelial cancers are less invasive than epithelial cancers. Because the vast majority of OC is high-grade serous,(6)

The risk factors for the development of ovarian cancer include family history of gynecologic cancer, genetic mutations, age, Menstrual-related factors , Age of menarche and menopause , obesity, frequency of ovulation, ethnic heritage, and dietary factors.

Number of pregnancies (parity) is an important risk factor. Women with a history of pregnancy have a 50% lower risk of OC, smoking, hormonal drug, oral contraceptive and Lynch syndrome . (7) Staging of ovarian cancer classified by

The International Federation of Gynecology and Obstetrics in US (FIGO) on a scale of I to IV. Stage I is cancer that is localized and contained in the ovary or ovaries. Stage II is cancer that has spread to other pelvic organs such as the uterus, bladder, or rectum, but is confined to the pelvis Stage III is cancer that has spread to the lymph nodes and/or abdominal lining and organs, with possible superficial liver metastases. Stage IV is cancer that has spread to other organs, (8). The histological grading Tumors are classified as either well-differentiated (G1), moderately differentiated (G2), poorly differentiated (G3), or undifferentiated (G4) (G4). (9)

MATERIALS AND METHODS

A total number 85 ovarian cancer patient age range (20 to 80) years old in their different stage and grade of the disease attending oncology clinics in National Cancer Registry for Gazira State from different gynecological clinics in Sudan were included in this review study, Hospitals are selected based on receiving approval from the hospital administrations. The study will be conducted from february 2020 to July 2022. Data collection will start in february 2022, feiled study by A validated questionnaire,) will be used to elicit information on following parameters. 1. Socio demographic characteristics, 2. Patient clinical data, 3. Diagnostic data, 4. Lifestyle factors, Sample size according to sample size equsion

.Inclusion Criteria:

all women diagnosed with ovarian cancer using histopathology techniques and attending National Cancer Institute during study period, Healthy donation with match cases age were included as control, In case and control agreement to joined study

Exclusion Criteria:

Non ovarian cancer patients, benign lesions, cases of metastatic tumors from other primary sites . Diagnosed with any other form of cancer

A well structured tested questionnaire was used to collect data from study population questionnaire included demographic and clinical characteristics of the patients such as: age, age at diagnosis, occupation, marital status,, tribe, family history, clinical stage at diagnosis [localized, locally advanced, metastasis], disease progression [yes/no], pathological grade [, histopathology results, (level at diagnosis),

RESULTS

Socio-demographic and clinical data

Overall ,85 Ovarian cancer patients attending National Cancer Institute. Majority of the ovarian cancer patients were in the age group of <50 years representing 66%, and 34% in age group >50 years. The mean and median age was with age means (55.44) and (56) respectively.

Fivty one percent of ovarian cancer patients were reported Johayna tribe, 26 percent Gallia, 7 percent darforian, 6 percent baggara, 6 percent Nigerian, 3 percent nuba and 1 percent nile Nubian.

Six percent uneducated women,40 percent of the ovarian cancer patients were noted to reach primary school level while the rest 27 percent and 27 percent were reported to reach secondary school and university level respectively.

Eighy eight percent haven't family history and 12 percent have family history and 60 percent hereditary from first Degree

six percent of the women were reported to be not married being divorced, 13 percent of women were not married, widowed or separated while the remaining 13 percent,68 percent were married.

68 percent of the participants were from Gezira state and 31 percente from other Urban Areas in sudan.,

Eighty seven percent were house wife and 13 percent working women,

17% from patients in this study new case were diagnosed in 2022 and 84% diagnosed from other year

And 84% from patients normal breast feeding and 17% no breastfeeding. This is Socio-demographic data of study population explanie in table 1.

Characteristics		Frequency	Percent %
Age Group	< 50 Years	56	66%
	>50 Years	29	34%
	Total	85	100
Stock tribes	Gaalia	22	25.9
	Johayna	43	50.6
	Baggara	5	5.9
	Nigerian	5	5.9
	Nile Nubian	1	1.2
	Nuba	3	3.5
	Darforian	6	7.1
	Total	85	100
Marital Status	Divorced	5	5.9
	Marred	58	68.2
	Single	11	12.9
	Widower	11	12.9
	Total	85	100
Education Level	Illiterate	2	2.4
	Khalwa	3	3.5
	Primary	34	40.0
	Secondary	23	27.1
	University	23	27.1
	Total	85	100
Occupation	House wife	74	87.1
	Medical	1	1.2
	Teacher	3	3.5
	Others	7	8.2
	Total	85	100
Residence	Urban Areas	27	31.8
	Rural Areas	58	68.2
	Total	85	100
Family history	Yes	10	11.8
	No	75	88.2
	Total	8	100
Relationship of kinship	1nd	6	60
	2nd	2	20
	3nd	2	20
	Total	85	100
New case	no	71	83.5
	yes	14	16.5
	Total	85	100
Beast feeding	Yes	71	83.5
	No	14	16.5
	Total	85	100

Table 1 : Socio-demographic data of study population.

Ninety percent of ovarian cancer patients were diagnosed with serous carcinoma , 8 percent were mucinous carcinoma and 2 percent were clear cell carcinoma

Majority of the ovarian cancer patients were at FIGO Stage between (I to III) which account fivty one percent; while the remaining 28 percent and 21 percent were in II and 1 FIGO Stage respectively

35% from patients diagnosed in grad III , 33% in grad II and 32% in grad I

84 % from ovarian cancer patients not take oral contraceptive and 17% take oral contraceptive and 88% from patients not take hormonal drug and 13% take hormonal drug

28% from patients suffering from diabetic and hypertention.. clinical characteristics of study population explain in table 2.

Characteristics		Frequency	Percent %
Type of O.C tumer	Serous carcinoma	76	89.4
	Musinous carcinoma	7	8.2
	Clear cell carcinoma	2	2.4
	Total	85	100.0
stage	Stage I	18	21.2
	Stage II	24	28.1
	Stage III	43	50.7
	Total	85	100
grade	Grade I	27	31.8
	Grade II	28	32.9
	Grade III	30	35.3
	Total	85	100
Other disease	ASTHMA	3	3.5
	diabetic & hypertention	24	28.3
	No Other disease	58	68.2
	Total	85	100
Hormonal drug	Yes	11	12.9
	No	74	87.1
	Total	85	100
oral contraceptive	Yes	14	16.5
	No	71	83.5
	Total	8	100

Table 2 : clinical characteristics of study population

Frequency of common symptoms of ovarian cancer

Results Abdominal pain		
	AP YES	AP NO
stage I	5 (5.65) [0.07]	1 (0.35) [1.19]
stage II	10 (10.35) [0.01]	1 (0.65) [0.19]
stage III	65 (64.00) [0.02]	3 (4.00) [0.25]

Table 3 The chi-square statistic is 1.7306. The p-value is .420928. The result is not significant at p < .05

Results Vaginal bleeding

	V.B YES	V.B NO
Group 1	5 (3.18) [1.05]	1 (2.82) [1.18]
Group 2	10 (15.35) [1.87]	19 (13.65) [2.10]
stage III	30 (26.47) [0.47]	20 (23.53) [0.53]

Table 4 The chi-square statistic is 7.1905. The p-value is .027453. The result is significant at p < .05

Results Vaginal discharge		
	V.D YES	V.D NO
stage I	2 (2.89) [0.28]	1 (0.11) [7.55]
stage II	10 (10.61) [0.04]	1 (0.39) [0.96]
stage III	70 (68.49) [0.03]	1 (2.51) [0.90]

Table 5 The chi-square statistic is 9.7639. The p-value is .007582. The result is significant at p < .05.

DISCUSSION

Ovarian cancer is the seventh most common cancer, and it is the most common cause of high mortality from gynecological cancers worldwide, In developing countries, it is ranked the second most common gynecological cancer, and considered the fourth most common of all cancers in women .Unfortunately, the most of cases are detected in late or advanced stages and grade, which participate to the high morbidity and mortality rates among women with ovarian cancer agree with most of studies about ovarian cancer cases. Data on ovarian cancer about demographic data of patients most tranded in previous study mean age at diagnosis , histological type of OC stage and grade of OC.

Acorrding to Schildkraut etal 2014 in USA The mean age of African American women at diagnosis (was 57.4 years (SD = 11.2 years) and Age group between (20 – 79) , Age at menarche from (12-13) high number with in patients . In sudan Age, Two-thirds of women diagnosed with ovarian cancer are age 55 or older.. (Wisal et. al. 2017) . In East Africa and North America (70%) of all the cases with a mean age of 50.5 years.(Rambau et al., 2020). In japan Age at diagnosis 40 -70 and the ovarian cancer most visible in age group 50 – 59 (Machida et al.2019). In all previous study age high rate of OC in age between (50 to 60) agree with our study, Older women who have never given birth and high age which increase possibility of OC disease, Even though OVC mainly develops in older women there is younger age range were showed among Sudanese ovarian cancer patient Because of its potential for aggressive local invasion and the lack of early screening sensitive methods. ovarian cancer present more in women who were never pregnant (nulliparous), and a protective effect is reported in women with multiple pregnancies.

Majority of the ovarian cancer patients were at FIGO Stage between (I to III) which account fivty one percent; while the remaining 28 percent and 21 percent were in II and 1 FIGO Stage respectively. (Abuidris et al, 2016). the majority of patients who presented with advanced-stage disease. Acorrding to Schildkraut etal 2014 The stage more common stages III/IV in Schildkraut etal 2014 study. Machida et al.2019 showed stage I high presence followed by stage III of OC disease. Schildkraut etal , and Machida et al, and Abuidris et al, 2016 agree with our study stage III present in majority of cases of OC.

Ninety percent of ovarian cancer patients were diagnosed with serous carcinoma , 8 percent were mucinous carcinoma and 2 percent were clear cell carcinoma. Serous carcenomus type more common in to Schildkraut etal 2014. A total number of 36 (42.9%) cases were reclassified to High Grade Serous Carcinoma (HGSC).(Rambau et al, 2020). Abuidris et al, Rambau et al and Schildkraut etal and Majority of study agree with our study the Serous Carcinoma more common type present in patients with OC ,

35% from patients diagnosed in grad III , 33% in grad II and 32% in grad I, Poorly/undifferentiated more common grade in Schildkraut etal 2014 study. Schildkraut etal Majority of study disagree with our study the patients with OC usually diagnosed with advance grade of disease grade III or II.

Ovarian Epithelial cell being the most common. The first type serouscarcinomus, present in different age groups. Globally, A substantial number of women around the world present in advanced stages of the disease as a result of the lack of accurate screening methods, which have reduced prospects for early diagnosis and cancer detection. The majority of individuals relapse after treatment-

induced regression because the medicines available are inadequate due to the late presentation. In sudan the majority of patients who presented with advanced-stage disease did not receive complete examinations or symptomatic treatment. (Abuidris et al, 2016).

In present study a first -degree relative with the disease, have an increased risk. Hereditary forms of ovarian cancer can be caused by mutations in specific genes, but Schildkraut etal study disagree and showed in his study No First degree relative with ovarian cancer. But agree with this study because Acorrding to McLemore, 2010 Positive family history of ovarian and breast in first-degree relatives (mother, sister, or daughter) is very high risk to disease occurrence

The use of oral contraceptives is associated with decreased risk of ovarian cancer (Saeed et al. 2014) in this study minority of patients used of oral contraceptive our result may align and agree with this theory. Because 84 % from ovarian cancer patients in this study not take oral contraceptive and 17% take oral contraceptive.

88% from patients not take hormonal drug and 13% take hormonal drug, Wisal et. al. showed the short-term hormone replacement therapy (HRT) contributes to risk, but those using HRT more than 10 years show twice the risk for ovarian cancer compared to those who do not. Wisal et. al. agree our stady minority of patients used of hormonal therapy

Some post-high school training Education most visible in Schildkraut etal 2014 study disagree with our study, because most of women including study from far villages and do not have sufficient education and do not have knowledge about the importanceof eduction.

Conclusion

main age of patients with ovarian cancer (51- 65), majority of patients from rural areas, about 50% of patients johayna tribe, risk factor of family history very important for early detection serous carcinoma type is the most common histological type of ovarian cancer, stage III is more present among patients.

Recommendation

It's very important to give little attention for screening of OVC cancer, infrequent awareness of disease, diagnostic facilities not widely available, comparatively low life expectancy. This is factors of high risk and noumber of patients and high mortility.

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