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Cancer of the ovary at the University of Benin Teaching Hospital: a 10-year review, 1992-2001

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Summary

Forty-nine patients managed for primary ovarian cancer between January 1992 and December 2001 were analyzed, to appraise the incidence, clinical presentation and management. Data of relevance to the socio-demographic profile, clinical presentation, histopathological types, treatment modality and outcome of management were extracted from patients' case notes. A total of 412 patients with gynaecological malignancies, including 49 (11.9%) ovarian cancer were admitted in the gynaecological wards in the study period. The peak age of incidence was between 51-60, mean 58 years. Social classes I and II were in the majority, 21.7% and 32.6% respectively. Late presentation, with stage III (76.2% of the patients) is the modal stage at presentation. The majority (73.8%) of the tumours were of epithelial origin. Gastrointestinal symptoms (86.9%) were the most common clinical features at presentation. The majority of patients (91.3%) had surgery (cytoreductive) as first line treatment, while 36/42 patients had adjuvant chemotherapy. Intraoperative haemorrhage (11.9%) was the most common complication. 2.4% of the patients died intraoperatively. Primary ovarian carcinomas in Benin are predominantly epithelial in origin. It is the second most frequent gynaecological malignancy. Patients present late, mortality is high and unsatisfactory despite multimodal therapy. Public enlightenment to increase awareness and introduction of screening program for early detection is advocated.

Keywords: *Epithelial, ovarian carcinoma, late presentation*

Résumé

Cette étude avait pour but d'estimer l'incidence, d'analyser les visites cliniques et le ménagement du cancer ovarien primaire chez 49 patients de Janvier 1992 à Décembre 2001. Les données sociodémographiques, histopathologiques, le modalité de traitement et du ménagement de chaque patient étaient extrait de chaque registre correspondant. Au total 412 ayant des cancers génicologiques, inclues 49 (11.9%) du cancer ovarien étaient admise dans cette unité durant l'étude. le sommet d'âge était entre 59-60 ans avec une moyenne de 58 ans.

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La classe sociale I et II étaient la majorité 21.7% et 32.6% respectivement. La présentation tardive en clinique (stage III) (76.2% des patients) était le mode de la présentation. La majorité (73.8%) des tumeurs étaient épithéliales. Les symptômes gastro-intestinaux (86.9%) étaient les plus communs caractéristiques cliniques à la présentation. La majorité des patients (91.3%) avaient eu une chirurgie (cytoreductive) comme premier ligne de traitement alors que 36/42 reçurent une chimiothérapie adjuvante. L'hémorragie intraopérative (11.9%) était la plus commune et 2.4% mourraient suite à la chirurgie intraopérative. Les carcinomes primaires ovariens dans l'état du Bénin ont une origine épithéliale et le second dans la série génicologique. La présentation tardive conduit à la mortalité élevée et insatisfaisante après les traitements régiment multiples. Des campagnes de sensibilisation et d'introduction des tests de dépistage précoce au public sont recommandées.

Introduction

Cancer of the ovary is one gynaecological malignancy that presents the greatest challenge to the gynaecological oncologist. Ovarian cancer is the commonest killer amongst the female pelvic malignancies [1-3]. Effective community screening programs for ovarian cancer are unavailable worldwide. The disease is typically asymptomatic, relatively silent in its development and often ignored or inappropriately referred especially to the physicians [3,4]. Epithelial ovarian cancer is the most common histological type of ovarian malignancy and management almost always involves the combination of surgery and chemotherapy. The five-year survival of women with advanced-stage disease is still poor, probably due to the lack of adequate understanding of the natural history of the disease [5,6,7].

In the last two decades, modest advances have been made in surgical and chemotherapeutic management of ovarian cancer [7-12]. Aggressive cytoreductive surgery is a crucial component of these advances in management [9]. This has been enhanced by the introduction of cisplatin and more recently taxoid-based chemotherapy [7,11,12].

In our environment, ovarian cancer next to cervical carcinoma accounts for most gynaecological cancer related admissions and deaths in the ward [13,14]. There is a paucity of data on ovarian cancer in this centre, hence the need for an up-to-date review of the epidemiology, presentation and management of the disease.

Materials and methods

The case notes of all the patients managed for primary ovarian cancer at the University Teaching Hospital of Benin (UBTH) between January 1992 and December 2001, a study period spanning 10 years were reviewed. Data relating to the socio-demographic profile of the patients, clinical presentation, physical examination findings, histopathological types, clinical management and outcome of management were extracted. The total number of other gynaecological malignancies was obtained from the gynaecological ward register as well as the operating theatre records. All patients were allotted a social class using Olusanya *et al* stratification formula [15]. Data obtained was analysed with Microsoft Excel, Office 2003 statistical software to generate frequency tables and plot graphs.

Results

During the 10-year period under review, a total of 412 gynaecological malignancies were admitted into the UBTH gynaecology ward, of these 49 were ovarian, constituting 11.9%. Forty-six case notes were retrieved, which formed the material for this study. The mean age of the patients was 58.0 years, with a range of 17-80 years. Table 1 shows the age distribution of the patients. The age group 51 – 60 years formed the majority 14/46 (30.4%) of the patients, followed by patients within the age brackets of 41 – 50 years (21.7%) and 31 – 40 years (17.4%) respectively. Patients below the age of 20 years made up 4.4% of the study group. The majority (54.3%) of the patients belonged to social classes II and I. Figure 1 shows the social class distribution of the patients. A minority of 8.7% were in social class V. Two (4.4%) patients could not be allotted a social class due to poor documentation of the occupation of the patient and or her spouse.

Table 1: Age distribution of patients with ovarian Cancer

Age (years)	Frequency	Percentage
11 – 20	2	4.40
21 – 30	7	15.20
31 – 40	8	17.40
41 – 50	10	21.70
51 – 60	14	30.40
61 – 70	4	8.70
71 – 80	1	2.20
Total	46	100.00

Twenty six (56.5%) patients were premenopausal amongst the study population, while 18/46 (39.1%) patients were nulliparous. Thirty (65.2%) of the women with primary ovarian cancer were of low parity (Para 0 or 1). Table 2 shows the frequency distribution of parity amongst

the study population. Four (8.7%) patients were grandmultiparous.

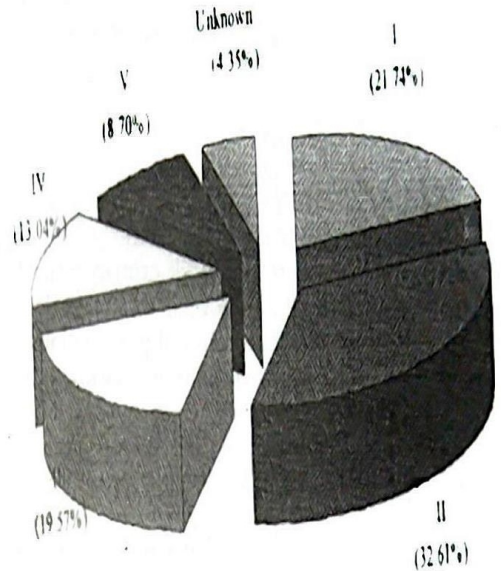


Fig. 1: Social class distribution of patients in the study

Table 2: Parity distribution of the study population

Parity	Frequency	Percentage
0	18	39.10
1	12	26.10
2	6	13.00
3	4	8.70
4	2	4.40
≥5	4	8.70
Total	46	100.00

Table 3: Main clinical presenting features

Clinical Features	Frequency	Percentage (%)
Gastrointestinal symptoms	40	86.90
Abdominal discomfort	32	69.60
Abdominal mass	28	60.90
Urinary symptoms	22	47.80
Abdominal distension	20	43.50
Dysmenorrhoea	16	34.70
Weight loss	14	30.40
Lower limb oedema	14	30.40
Dyspareunia	8	17.40
Abdominal pain	8	17.40
Abnormal vaginal bleeding	4	8.70
Dyspnoea	4	8.70
Asymptomatic	2	4.30

The most common feature at presentation was gastrointestinal symptoms as seen in 86.9% of the patients. Table 3 shows the frequency distribution of the recorded

clinical features at presentation. Abdominal discomfort, abdominal mass and urinary symptoms had frequencies of 69.6%, 60.9% and 47.8% respectively. Weight loss was found in 30.4% of the patients. Two (4.3%) patients were asymptomatic at presentation. The majority of the patients had more than one presenting complaint.

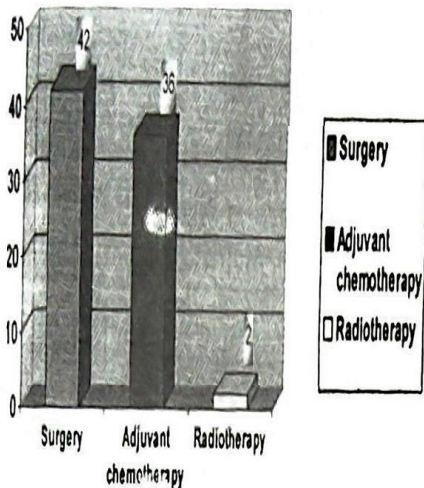


Fig. 2: Treatment modality for ovarian cancer during the study period

Figure 2 shows the modalities of treatment of the 46 patients. 42 (91.3%) had surgery and of these, 36 (85.7%) had adjuvant chemotherapy. No patients had chemotherapy without surgery. Of the total, 2 (4.3%) patients had radiotherapy. Four patients did not have surgery because during the period of stabilization, 2 patients succumbed to the disease, the other 2 left against medical advice.

Table 4 presents the stages of ovarian cancer at surgery for 42 patients in the study period. The modal stage at presentation was stage III (76.2% of the patients). This was followed by stage II, and stage IV (14.3% and 9.5% respectively). There was no patient with stage I disease in the study.

Table 4: Stages of ovarian cancer at presentation

Stages	Number	Percentage
I	0	0.00
II	6	14.29
III	32	76.19
IV	4	9.52
Total	42	100.00

Table 5 shows the complications resulting from surgery. Intraoperative haemorrhage (11.9%) was the most common. Two patients suffered intraoperative cardiac arrest. One of them did not recover. One patient (2.4%) had bilateral ligation of the ureters. Thirty-six patients had adjuvant chemotherapy. Fourteen (38.9%) died in the ward

during the course of treatment, 14/36 patients were lost to follow up and did not complete their chemotherapy courses, while 8/36 are still being followed up.

Table 5: Complications at Surgery

Complications	Frequency	Percentage
Severe primary haemorrhage	5	11.90
Wound sepsis/breakdown	4	9.52
Cardiac arrest	2	4.76
Burst Abdomen	2	4.76
Ureteric injury	1	2.38

Table 6 shows the histological types of ovarian cancer in Benin. The majority (73.8%) of the tumours were of epithelial origin. Germ cell tumours constituted 19.04%, while gonadal stromal tumours accounted for 7.14%.

Table 6: Primary Ovarian cancer histological class distribution at the UBTH

Histological Types	Frequency	Percentage
Serous cystadenocarcinoma	20	47.62
Mucinous cystadenocarcinoma	8	19.05
Dysgerminoma	3	7.14
Endometrial carcinoma	2	4.76
Endodermal sinus tumour	2	4.76
Teratocarcinoma	2	4.76
Granulosa cell tumour	2	4.76
Clear cell carcinoma	1	2.38
Ovarian choriocarcinoma	1	2.38
Sertoli – leydig cell tumour	1	2.38

Discussion

Cancer of the ovary constituted 11.9% of all gynaecological cancers seen during the 10 year period of study, which was essentially the same finding by previous workers in the department [14] but marginally higher than the 8.2% quoted at the University of Port Harcourt Teaching Hospital [13]. This hospital incidence is however much lower than figure of 25% quoted from some developed countries [1,2]. Comparatively, the peak age of incidence and the mean age (58 years) are similar to international figures. The virtual difference in frequency of occurrence of ovarian cancer may be due to the fact that invasive carcinoma of cervix is now rare in the developed country, while in Benin and most developing countries carcinoma of the cervix is the leading female gynaecological malignancy [14].

The majority of our patients were premenopausal, low parity and belong to social class one. Ovarian cancer is more common in industrialized countries (except Japan) and has been associated with Westernisation [16-18]. A

large percentage (54.3%) of our patients in this study belonged to the high socio-economic class (social classes I and II). Often people in the lower socio-economic classes are of high parity and tend to breastfeed for longer periods when compared to the elite. Also, a large proportion of these patients were of low parity. This is in keeping with the observation that ovarian cancer is more common in women who ovulate frequently (the incessant ovulation theory) and the protective effect of the prolonged use of oral contraceptive pills and breast-feeding on ovarian cancer [16,17].

Typically ovarian cancer is silent in onset and epithelial cell types constitute the majority. The majority of our patients had epithelial cell tumours and gastrointestinal symptoms are the most common presenting feature and it was noted in 86.9% of our study population. Two patients (4.3%) were asymptomatic. One of these patients presented for routine cervical smear, had a pelvic examination, which revealed an adnexal mass. Ultrasound scan done showed an ovarian tumour, which had features suggestive of malignancy. The second patient had an exploratory laparotomy for ruptured appendix and was found to have a stage II ovarian carcinoma. This study finding is in keeping with the fact that ovarian cancer usually is asymptomatic and present late in an advance disease stage [3]. The majority of our patients presented with Stage III disease.

Surgical cytoreduction of ovarian cancer has been associated with an increase in survival in all settings in which it has been studied [19-27]. The majority of our patients had surgical staging and debulking of tumour mass (91.3%). The optimum role of surgery is still not clear and evolving, either primary, secondary or interval laparotomy has been used for effective cytoreduction [19,20]. The benefits of aggressive surgery have been shown to be generally greatest, in patients with chemosensitive disease. There was no patient with an early stage I disease amongst this series, which is consistent with most workers finding in the management of ovarian cancer, they are usually advance disease at presentation [12]. The mortality following surgery and surgical complications rate was high in the study. Mortality study from other centres are similarly high [24-27], however this finding shows an imperative need for a specialist oncology unit, for effective surgical and chemotherapeutic management of patients with gynaecological cancers in our hospital.

Adjuvant chemotherapy was commenced for 36 (86.7%) of the patients. All the patients had platinum base regimen but due to cost, fourteen patients could not complete the course of treatment. These patients did not come back after initial course of therapy. Only one patient (2.8%) had cis-platin and paclitaxel combination. Platinum based drugs regimens tend to increase remission rates, however greater rates of remission had been reported with paclitaxel [19,26]. The two patients referred for radiotherapy were both lost to follow up further evaluation of the role of radiotherapy was therefore not possible.

Conclusion

Mortality from ovarian cancer is high in Benin in the face of aggressive management involving surgery and adjuvant chemotherapy. Public enlightenment to increase awareness and introduction of an effective screening program will go a long way towards reducing the high morbidity and mortality rates presently attending ovarian cancer in Nigeria.

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