Original Article

Non-pregnancy related gynaecological causes of death in a Nigerian Tertiary Hospital

Boniface U. Ago, Ezukwa Omoronyia, Thomas U. Agan, Ogban Omoronyia[1], Godwin Ebughe[2]

Departments of Obstetrics and Gynaecology, [1]Community Medicine and [2]Pathology, University of Calabar Teaching Hospital, Calabar, Nigeria

ABSTRACT

Background: Most gynaecological causes of death are related to pregnancy such as ectopic pregnancy, unsafe abortion, septic incomplete abortion, and gestational trophoblastic diseases. Hence, it was necessary to review the non-pregnancy related causes of gynaecological deaths in our centre.

Aims and Objectives: The aim of this study was to review gynaecological deaths due to non-pregnancy related causes among women in our centre at the University of Calabar Teaching Hospital (UCTH).

Materials and Methods: This was a 5-year retrospective review of case notes of women who died in the gynaecological ward of UCTH. The demographic profile of the women, the diagnosis and the cause of death were extracted for analysis. All those whose diagnoses were pregnancy related were excluded.

Results: There were 38 gynaecological deaths, which were not pregnancy related. Of these, ovarian cancer (19) and cervical cancer (11) constituted 30 cases or 78.9% of causes of death. Endometrial cancer (3), uterovaginal prolapse (3), uterine leiomyosarcoma (1), and vulvovaginal cancer (1) constituted 8 cases or 21.1% of deaths. No deaths were recorded from uterine fibroids, dysfunctional uterine bleeding, pelvic inflammatory disease, etc.,

Conclusion: Cancers constitute the majority of causes of gynaecological deaths in women who are not pregnant. This emphasises the need for cancer prevention, early diagnosis and effective treatment.

Key words: Death; gynaecological disease; non-pregnant women; University of Calabar Teaching Hospital.

Introduction

Most of the mortalities in gynaecological wards, especially the emergencies, are from complications of early pregnancy. Ectopic pregnancy, septic incomplete abortion, unsafe abortion and its complications and gestational trophoblastic diseases have been reported to contribute to maternal deaths.[1,2]

It appears that environmental factors have a significant impact on the development of gynaecological cancers, and hence emphasis on avoidance of tobacco and unsafe sex, adherence to a balanced diet rich in fruits and vegetables, moderate exercise and use of the oral contraceptive are measures to substantially reduce a woman's cancer risk.[3] Overall, 12.5% of all deaths are attributable to cancer, and if the trend continues, it is estimated that by 2020, 16 million new cases will be diagnosed per annum, out of which 70% will be in developing countries.[4]

Address for correspondence: Dr. Boniface U. Ago, Department of Obstetrics and Gynaecology, University of Calabar Teaching Hospital, Calabar, Nigeria.
E-mail: bonifaceago@yahoo.com

Access this article online	
Website: www.tjogonline.com	Quick Response Code
DOI: 10.4103/0189-5117.192229	

How to cite this article: Ago BU, Omoronyia E, Agan TU, Omoronyia O, Ebughe G. Non-pregnancy related gynaecological causes of death in a Nigerian Tertiary Hospital. Trop J Obstet Gynaecol 2016;33:216-9.

In a comprehensive global cancer statistic from the International Agency for Research on Cancer, gynaecological cancers constituted approximately 19% of the estimated 5.1 million new cases, 2.9 million cancer deaths and 13 million 5-year prevalent cancer cases among women in the world in 2002. Cervical cancer accounted for 493000 new cases and 273000 deaths; uterine body cancer accounted for 199000 new cases and 50000 deaths; ovarian cancer accounted for 204000 new cases and 125000 deaths; cancers of the vagina, vulva and choriocarcinoma together constituted 45900 cases.[5]

Apart from cervical cancer where screening is associated with reduction in cancer mortality, screening for vulvar, vaginal, endometrial, fallopian tube and ovarian cancers are yet to be fully elucidated.[6] Early stage of disease at presentation and astute clinical evaluation and management are important clinical determinants of good prognosis.

This study was undertaken to review the causes of non-pregnancy related gynaecological deaths among women in the gynaecological ward at University of Calabar Teaching Hospital (UCTH).

Materials and Methods

This was a 5-yearretrospective review of case notes of women who died in the gynaecological ward from January 1st 2010 to December 31st 2014. Approval from the Research/Ethics Committee was obtained at the proposal stage of this study. The demographic profile of the patients, the diagnosis and the cause of death were extracted from the case notes for analysis. All those whose diagnoses were pregnancy related were excluded. In addition, all those whose diagnoses were not known were also excluded. In our centre, breast diseases are managed by the general surgeons, hence, there were not included in our study.

The data was entered and analysed using the Statistical Package for Social Sciences (SPSS, IBM) version 22 for patient characteristics, causes of death and trend analysis presented using frequency tables and line graph.

Results

During the study period, there were 38 non-pregnancy related deaths recorded in the gynaecological ward register. Nineteen were due to ovarian cancer, 11 were due to cervical cancer, 3 were due to endometrial cancer and another 3 were due to uterovaginal prolapse, whereas uterine leiomyosarcoma and vulvovaginal cancer caused 1 death each. This is shown in Table 1.

Cancer (35, 92.1%) was the most common non-pregnancy related gynecological cause of death in this study. The annual distribution of the deaths is shown in Table 2. Mean age of patients at death was 55.1 ± 24.1 years, ranging from 23 to 78 years, with the age group distribution shown in Table 3.

Table 1: Non-pregnancy related gynaecological cause of death

Cause of death	Frequency	Percent
Ovarian cancer	19	50.0
Cervical cancer	11	28.9
Endometrial cancer	3	7.9
Uterovaginal prolapsed	3	7.9
Uterine leiomyosarcoma	1	2.6
Vulvovaginal cancer	1	2.6
Total	38	100.0

Table 2: Annual distribution of non-pregnancy related gynecological deaths

Year	Frequency	Percent
2010	3	7.9
2011	17	44.7
2012	8	21.1
2013	7	18.4
2014	3	7.9
Total	38	100.0

Table 3: Age distribution of common non-pregnancy related gynecological causes of deaths

Variable (years)	Frequency	Percent	Mean age±SD (range)
General age distribution			
20-24	1	2.6	55.1±24.1
25-29	2	5.3	(23-78)
30-39	2	5.3	
>40	33	86.8	
Total	38	100.0	
Ovarian cancer			
20-29	3	15.8	45.7±13.1
30-39	2	10.5	(23-62)
40-49	5	26.3	
>50	9	47.4	
Total	19	100.0	
Cervical cancer			
>40	11	100.0	57.0±11.8
Total	11	100.0	(40-78)
Endometrial cancer			
>40	3	100.0	55.3±4.5
Total	3	100.0	(51-60)
Uterovaginal prolapse			
>40	3	100.0	50.0±10.0
Total	3	100.0	(40-60)
Vulvovaginal cancer	1	100.0	
Uterine leiomyosarcoma			
>40	1	100.0	55.0
Total	2	100.0	

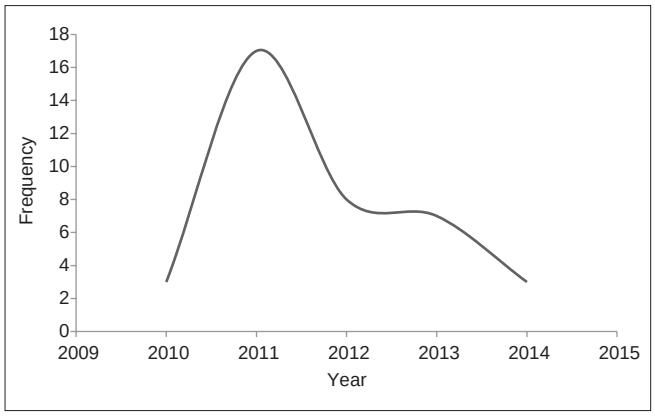

Figure 1: Trend in non-pregnancy related gynecological deaths

Peak year of occurrence of gynecological deaths during the study period was 2011, with significant decline in the following years. This trend is clearly depicted in Figure 1. Most of the deaths were due to ovarian cancer followed by cervical cancer.

Discussion

Gynaecological cancers were the most common non-pregnancy related gynaecological cause of death in our center during the study period.

The lead author joined the gynaecological oncology firm of this hospital in 2011. Prior to this time, many advanced cancer cases were referred or discharged home, but as we began dedicated care, many of the patients who probably would have died at home were offered palliative care. Subsequently, there was a progressive decline in the deaths as more surgeries and chemotherapy reduced the death rate in our centre. We practice primary cytoreductive surgery as well as neoadjuvant chemotherapy, as the case may be, in ovarian cancer therapy. Neoadjuvant chemotherapy has been successful in our setting, and the results have been reported elsewhere.[7] We have also reported the value of multidisciplinary collaboration in the management of advanced ovarian cancer in our centre.[8]

We do not have a radiotherapy facility in our centre yet. Many of the patients with bulky cervical lesions are referred for chemoradiation elsewhere, and then asked to come back for follow up.

There appears to be an anecdotal increase in the incidence of gynaecological cancers in our centre, in south-south Nigeria. This may be in agreement with reports linking infectious agents as well as lifestyle and diet westernization along with socioeconomic factors to the increase in cancer incidence in developing countries.[9]

The mean age at presentation and diagnosis was 55.1 ± 24.1 years. It was lower for patients with ovarian cancer (45.7 ± 13.1 years). It is interesting to note that 26.3% of the patients who died of ovarian cancer in our centre were less than 40 years old. Painfully, we had a 23-year-old never pregnant nullipara (Para0^{+0}) who presented with stage IVb endodermal sinus tumour. She underwent successful optimal debulking surgery though with fertility conservation, and six courses of (bleomycin, etoposide, cisplatin) chemotherapy. Unfortunately, there was an aggressive relapse, with splenic and hepatic infiltrations, and the patient could not afford secondary surgery. The role of fertility sparing surgery in this case has been found adequate in some studies.[10] In a Gynecologic Oncology Group study of 132 survivors of platinum-based chemotherapy for ovarian germ cell tumour, median survivor age at diagnosis was 24.3 years and the median age at study entry was 35.5 years (approximately 10 years of follow up), 71 of the 132 (53.8%) of the patients had fertility sparing surgery, out of which 24 patients had successful pregnancies and deliveries, whereas premature menopause was documented in only 2 women.[11]

Ovarian cancer was the most common cause of death in our study This was the situation in theUnited States of America where malignant neoplasms of the ovary cause more deaths than any other female genital cancers.[12] The largest number of patients with ovarian cancer are in the age group 55–64 years (median 63 years).[13] However, in our study, although the mean age for ovarian cancer was 45.7 ± 13.1 years, the largest number of patients had an age range of 50–62 years. This finding is similar to an earlier study in Enugu,[14] where the mean age of cases with ovarian cancer was 45.4 ± 17.1 years. However, it was different from demographic data at a neighboring teaching hospital (Abakaliki) where most of the patients with ovarian cancer were in the 60–69 age group.[15]

Cervical cancer was the second most common cause of death in our study. This is probably because our practice guideline has been of early intervention and referral radiotherapy, either as adjunctive therapy or primary therapy. Some of the patients lost to follow-up either died in the course of radiotherapy or died at home, unable to afford radiotherapy. We have reported some of the challenges in the management of cervical cancer in our center elsewhere.[16]

The patients who died of endometrial cancer had surgeries elsewhere but were referred to our centre. They presented at advanced stages and died while been evaluated for treatment. The patient with vulvovaginal cancer had also had excisional biopsy three times at a peripheral hospital. She presented

with severe anaemia following profuse bleeding from the necrotic vaginal cancer lesion and died shortly after blood transfusion prior to surgery. The late presentations and advanced stages of the disease were responsible for these deaths. The patient with leiomyosarcoma died following anaesthetic complication, whereas the 3 patients who had uterovaginal prolapse (procidentia with decubitus ulcers) died of sepsis and complications during surgery.

Conclusion

Gynecological malignancies constitute the majority of non-pregnancy related gynecological causes of death in this study. There is the need for an intensified effort toward public awareness on prevention, early diagnosis and treatment of cancer.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

References

1. Rocha Filho EA, Santana DS, Cecatti JG, Costa ML, Haddad SM, Parpinelli MA, *et al*. Awareness about a life-threatening condition: Ectopic pregnancy in a network for surveillance of severe maternal morbidity in Brazil. Biomed Res Int 2014;2014:965724.
2. Froeling FE, Seckl MJ. Gestational trophoblastic tumours: An update for 2014. Curr Oncol Rep 2014;16:408.
3. Quinn MA. Screening and prevention of gynaecological cancer. Rev Gynaecol Pract 2003;3:148-55.
4. Abdulkareem F. Epidemiology and Incidence of Common Cancers in Nigeria. Cancer Regist Epidemiol worshop April 2009 2009;1-58.
5. Sankaranarayanan R, Ferlay J. Worldwide burden of gynaecological cancer: The size of the problem. Best Pract Res Clin Obstet Gynaecol 2006;20:207-25.
6. Symonds IM. Screening for gynaecological conditions. Obstet Gynaecol Reprod Med 2013;23:14-9.
7. Kumar L, Pramanik R, Kumar S, Bhatla N, Malik S. Neoadjuvant chemotherapy in gynaecological cancers – Implications for staging. Best Pract Res Clin Obstet Gynaecol 2015;29:790-801.
8. Ogbu Ewezu N. Huge Metastatic Multicystic Ovarian Cancer with Liver Involvement: A Case Report. J Cancer Treat Res 2014;2:21.
9. Jemal A, Center MM, DeSantis C, Ward EM. Global patterns of cancer incidence and mortality rates and trends. Cancer Epidemiol Biomarkers Prev 2010;19:1893-907.
10. Farthing A. Conserving fertility in the management of gynaecological cancers. BJOG 2006;113:129-34.
11. Fleming Nicole. Fertility sparing cancer surgery. In: Scott E, Allison E, Steven A, editors. Gynecologic Oncology: Evidence based peri-operative and supportive care, 2nd ed. Wiley Blackwell; 2011. p. 469-85.
12. Copeland LJ. Epithelial Ovarian Cancer. In: DiSaia C, editor. Clinical Gynecologic Oncology, 7th ed. Mosby Elsevier; 2007. p. 313-67.
13. Berek JS, Friedlander ML, Hacker NF. Epithelial ovarian, fallopian tube & peritoneal cancer. In: Berek and Hacker's Gynecologic Oncology, 6th ed. Wolters Kluwer; 2015. p. 464-529.
14. Iyoke CA, Ugwu GO, Ezukwu EC, Onah N, Ugwu O, Okafor O. Incidence, Pattern and Management of Ovarian Cancer at a tertiary Medical Center in Enugu, South East Nigeria. Ann Med Health Sci 2013;3:417-21.
15. Joseph A, Olisaemeka EP, Chukwudi OR, Igwe NM, Rose AM. Frequency and Pattern of Gynecological Cancers in Federal TeachingHospital Abakaliki, Nigeria. J of Basic Clin Reprod Sci 2015;4:54-7.
16. Ago BU. Cancer of the Uterine Cervix at the University of Calabar Teaching Hospital, Calabar Nigeria. Cancer Res J 2013;1:37.