The Pattern of Gynaecological Mortality in A Nigerian Sub-Rural Population

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Abstract: This was a retrospective analysis of the pattern of gynaecological mortalities in Irrua Specialist Teaching Hospital (ISTH) Irrua, Edo State. The numbers of case notes retrieved were 60 (91%) out of 66 case notes. The total Gynaecological admission was 3,154. Gynaecological mortalities accounted for 2.1% of the total deaths of patient on admission from gynaecological diseases over the study period. Gynaecological malignancies (76.7%) accounted for majority of the deaths. This was, mainly contributed by cervical and ovarian cancers 33% and 23.3% respectively, while choriocarcinoma accounted for 6.7% of the deaths. Post abortal complications contributed significant proportion of the total deaths. The highest proportion of deaths, 26.7%, occurred in the age group 20-29 years, while 45% of the death occurred in patients below 40 years. Majority, 65.6% of the patients attained secondary or tertiary levels of education.

Keywords: Genital cancers, mortality, diseases, gynaecology.

1. INTRODUCTION

Like most other group of diseases, gynaecological diseases can be complicated by mortality. Issues of maternal health and mortality have been attracting increasing concern and attention worldwide [1]. It is not surprising therefore that the United Nation Millennium Development Goals (MDGS) published in 2000 directly targeted Reproductive Health and maternal mortality as well as HIV/AIDS [1]. Gynaecological mortalities from genital malignancies, post-abortal complications and ectopic pregnancy constitute part of Reproductive Health and maternal mortality respectively [2]. Deaths from gynaecological diseases are contributed mainly by genital malignancies, post-abortal complication, ectopic pregnancy and anaesthetic complications [3,4]. These mortalities usually constitute a major part of the general hospital mortality cases. A study in a tertiary health centre in Abakaliki, Eastern Nigeria reported 20% contribution to hospital mortality by gynaecological diseases [4].

Mortality from gynaecological diseases cuts across all age groups. While deaths from post-abortal complications and ectopic pregnancies are commonly associated with adolescents [5-7], and young women of reproductive age. Deaths from genital cancers are mainly associated with the post menopausal and elderly women [4,8]. Other characteristics of mortalities from gynaecological diseases include late presentation, haemorrhage and sepsis from induced abortion, non-compliance with clinic follow up and poverty. Poverty usually explains why most of the patients visit prayer houses, traditional healers and spiritualist before going to the hospital for management [1, 4, 9].

As expected, the contributions to gynaecological mortality result from different categories of gynaecological diseases. The study by Laminl *et al.* in Western Nigeria reported 56.5% as contribution from genital malignancies and 30.4% by post-abortal complications [10]. However, Obi *et al.*, reported post-abortal complications as the major to deaths from gynaecological diseases. This was followed by gynaecological malignancies. Mortality resulting from genital malignancies was caused by cancer cervix. Carcinoma of the cervix consistently accounts for the most deaths in Nigeria [11]. This trend was also observed in South Africa amongst the black, coloured and white populations [8]. This however contrasts with what obtains in the western world, where ovarian cancer is the leading cause of death from genital cancers [12].

It is important to state that death from post-abortal complications and ectopic pregnancies constitutes a major contribution to maternal mortality in the developing world [13]. Various studies [5-7] from hospital records, reported proportions of 6% and 13% in Ibadan and 50% in Lagos, of the maternal mortality attributable to post-abortal complications. Similarly, proportions as high as 28% of the maternal mortality was attributed to abortion in Zimbabwe while 54% was recorded in Ethiopia [4] and 10% recorded in Pakistan [15].

There is a dearth of information from this environment regarding the pattern of gynaecological mortality. This study is necessary to document the trend of gynaecological mortality in our sub-rural setting

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over the past five years. In addition, it will form a basis for clinical auditing of gynaecological diseases management in our setting.

2. MATERIALS AND METHODS

This was a retrospective analysis of the gynaecological mortalities which occurred on admission at the Irrua Specialist Teaching Hospital, Irrua (ISTH) between January 1st 2009 and December 1st 2013. The study population included women admitted, treated and died in the gynaecology department of the hospital during the study. A written application was made to the medical records department following which all cases of gynaecological mortalities during the study were compiled. The case notes of the mortalities from gynaecological diseases in the hospital records were reviewed for relevant information. The information included the sociodemographic characteristics of the patients and the diagnosis. The data were analysed using the Statistical Package for Social Science (SPSS) 16.0, and results were presented in tables, and figures.

3. RESULTS

Over the study period, 66 gynaecological deaths were recorded out of which 60 case notes were available, the retrieval rate was 91%. The total number of gynaecological admissions over the study period was three thousand one hundred and fifty four patients (3,154). Mortality from gynaecological diseases therefore accounted for 2.1% of the total death from gynaecological admissions over the study period.

The age group with the highest gynaecology mortality was 20-29years, while the age group <20 years had the least mortality. 44 (73.3%) of the patients were parous while 43.3% of the patients had at least secondary education (Figure **1**, Table **2**).

Genital cancers (Table **3**), 48(76.7%) account for a majority of the mortality, although cancer of the cervix 20(33.3%) is the most implicated while cancer of the ovary was the second with value of 14(23.3%). Post-abortal complications accounted for 8(13.3%) of the mortalities. The others in the table included 2 post operative infection and 2 post-operative haemorrhages from myomectomy.

Majority of the malignancy occurred in advanced ages. The only case of mortality recorded in the <20 years age group was a case due to ovarian cancers, while the 10 cases recorded in the 20-29years age group were also due to ovarian malignancy and chorio carcinoma. All the cases of death resulting from post-abortal complications and ectopic pregnancy occurred in the < 20-29yrs age group (Table **4**).

Table 1: Socio Demography Age Group

Socio Demography Age Group	Frequency N=60	Percentage 100%
< 20	4	6.7
20 – 29	16	26.7
30 – 39	6	10.0
40 – 49	13	21.7
50 – 59	13	21.7
≥60	8	13.3

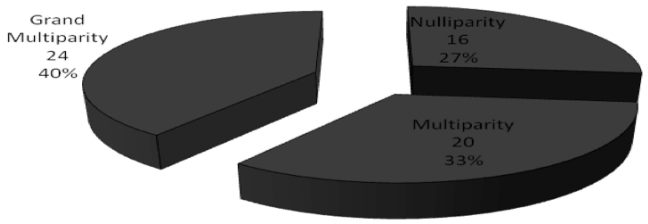

Figure 1: Parity.

Table 2: Educational Status

Educational Status	Frequency N=60	Percentage 100%
No formal education	4	6.7
Primary	16	26.7
Secondary	26	43.3
Tertiary	14	22.3

Table 3: Distribution of Mortalities According to Diagnose Disease

Diagnosis Genital Malignancy	Frequency N=60	Percentage 100%
Cancer of the cervix	20	33.3
Cancer of the ovary	14	23.3
Choriocarcinoma	4	6.7
Cancer of the endometrium	7	11.7
Vulva cancer	1	1.7
Post-abortal complication	8	13.3
Ectopic pregnancy	1	1.7
Anaesthetic death	1	1.7
Others	4	6.7

Table 4: Gynaecological Mortality According to Age Distribution

Diagnosis	<20	20-29	30-39	40-49	50-59	≥60	T
Genital Malignancy	1	10	3	13	12	7	46
Post-abortal complication	3	5	0	0	0	0	8
Ectopic pregnancy	0	1	0	0	0	0	1
Anaesthetic death	0	0	1	0	0	0	1
Others	0	0	2	0	1	1	4
Total	4	16	6	13	13	8	60

T= Total

4. DISCUSSION

The study showed that gynaecological diseases accounted for 2.1% mortality of the total gynaecological admission within the study period. This is indeed encouraging when compared to the findings elsewhere in which 20% of hospital deaths were as result of gynaecological diseases [4]. The apparent reason for the wide discrepancy in findings cannot be readily explained, it could be due to difference in referral pattern between the two centres; more also, Irrua being a rural community in which most relatives prefer to discharge their patients against medical advice when it becomes obvious that treatment is palliative in case of advance malignancy for financial reasons.

Unfortunately, the age group which accounted for most of gynaecological deaths was age range 20-29years in 26.7% of cases. This age group is the peak age for reproduction and the active working group in the society. The observed reasons for this finding were could be due to deaths post abortal complications and ectopic pregnancy which occur commonly in this age group in addition to deaths from ovarian cancers. Similarly, fatality rate of 45% in the age group under 40yrs in the study, (45%) was very high which is at variance to similar study in South Africa which recorded 20% mortality in the under 40yrs old [3]. This may be due to a relative more contribution from genital malignancies and post-abortal complication our study.

It was also observed that majority of the patients had one form of education or the other with 65.6% of them attaining secondary or tertiary levels of education. Ignorance therefore may not have been said to be only reason for late presentation in the enrolled patients. Rather, it looks more likely that poverty and resort to unorthodox means of treatment in many cases, may explain the reasons for late presentation.

Genital malignancies accounted for majority of the deaths (76.7%) in this study which is similar to work done by other workers [1,3,8,16]. This was however at variance with findings from few workers elsewhere [4,17,18]. In Eastern Nigeria gynaecological cancers have been shown to contribute overwhelming to gynaecological mortalities [19-21]. Cancer of the cervix alone accounted for 33.3% of the mortalities. This is rather unfortunate; because deaths due to cervical cancers have been reduced to the barest minimum in develop countries [16], due to well organised screening programmes and improved education and women empowerment in those countries. The study also reveals that choriocarcinoma, though almost curable malignancy [17], accounted for 6.7% of the deaths. This could be as a result of late presentation, poor compliance and the follow-up with treatment that is characteristic of our patients [4]. Again, this could be explained by poverty. In addition, choriocarcinoma was not reported as a cause of death in the work in South Africa [8] this further suggest that poverty and poor health seeking behaviour may be the reason for the observed difference in fatality rates from Chriocarcinoma in our setting.

Post-abortal complications, 13.3%, accounted for majority of the non cancerous deaths in this study. This is comparable to similar studies [2,3,5,6,8]. This finding is very significant especially as post-abortal complications are still a major contributor to maternal mortality in Nigeria and other developing countries [15, 18].

Four deaths which account for 6.7% of the total mortality in this study were due to post-operative complications. Two deaths from severe post-operative infection and another two deaths were due to post-operative haemorrhage from myomectomy and hysterectomy. This therefore calls for improvement in post operative care and establishment of functioning blood bank where blood and blood product would be available for twenty four hours in a day.

Anaesthetic death contributed minimally, 1.7%, to the total deaths in this study. This finding is different from report elsewhere which reported 17.8% of deaths attributable to anaesthetic complications [4]. This difference may be due to improvement in anaesthesia generally and a tendency towards more regional procedures in our setting.

In conclusion, this study showed that majority of mortality from gynaecological diseases is due to genital

malignancies. To forestall this, there is need to improve awareness on available screening method for early diagnoses of the premalignant stages of some of these genital cancers. In addition, there is the need to introduce subsidized treatment plan for patient with genital malignancy to reduce the management of non-compliance to treatment. Similarly abortion still contributes to mortality especially among the teenagers and young adult, and this call for the need to increase contraceptive use to prevent unwanted pregnancies in this group of persons. Because of the clandestine nature of abortions, there is need for Government to review the abortion laws in Nigeria since this law is not only obsolete, it serves no purpose. Also the use of youth advisory centres and youth advocacy groups should be encouraged by major referral centres, as they are the end points where most of these post-abortal complications are managed.

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