E.O. Were, MMed (O/G), MPH, Lecturer, Department of Reproductive Health, College of Health Sciences, Moi University, Eldoret, Kenya and N.G. Buziba, MMed (Path), Lecturer, Department of Pathology, College of Health Sciences, Moi University, P.O. Box 4606, Eldoret, Kenya.

Request for reprints to: Dr. E.O. Were, P. O. Box 4606, Eldoret, Kenya.

PRESENTATION AND HEALTH CARE SEEKING BEHAVIOUR OF PATIENTS WITH CERVICAL CANCER SEEN AT MOI TEACHING AND REFERRAL HOSPITAL, ELDORET, KENYA

E.O. WERE and N.G. BUZIBA

ABSTRACT

Objective: **To determine the clinicopathological characteristics and health care seeking behaviour of cervical cancer patients seen at Moi Teaching and Referral Hospital (MTRH).**
Design: **Prospective cross-sectional study.**
Setting: **Gynaecology Unit, Moi Teaching and Referral Hospital (MTRH), Eldoret, Kenya.**
Subjects: **Forty two consecutive cervical cancer patients seen at MTRH gynaecology unit between May 1998 and November 1999.**
Results: **The mean age of the patients was 49.4 years (95% CI 45.4 to 53.3 years) range 24 to 80 years. All had been married and 42.9% had been in polygamous unions. Slightly more than seventy six per cent had had five or more confirmed pregnancies. Contraceptive ever-use was 22%. The mean duration of clinical symptoms on presentation at MTRH was 8.2 months (95% CI 6.5 to 9.8 months) range 1 to 24 months. Female relatives and husbands were the first to be told about the symptoms by 90.3% of the patients and husbands alone by 48.8% of the patients. More than ninety per cent of patients sought health for the first time at a facility manned by trained health worker, with 39% visiting a dispensary or health centre first. More than 95% of patients had tumour stage 2 and above. Histopathologically, 80.9% of the tumours were squamous cell carcinoma, 11.9% were adenocarcinoma while the rest were anaplastic.**
Conclusion: **Patients with cervical cancer present late for treatment at MTRH. They are most likely to have discussed their illness with their female relatives and husbands and to have first visited peripheral facilities manned by trained healthcare workers. Interventions to improve health care seeking behaviour among cervical cancer patients need to include education of husbands in addition to increasing awareness of the disease among private medical practitioners and health workers at dispensary and health centre level.**

INTRODUCTION

Cancer of the cervix is the commonest female genital tract tumour in Kenya and the sub-Saharan Africa(1-3). Over eighty per cent of the cases of present with advanced disease. This usually means that only radiotherapy or palliative care is possible. In Kenya, the fully established radiation treatment centres are located in Nairobi and are often congested with large backlogs of patients. Access to these facilities is further complicated by the socio-economic factors. Previous studies(1,3) have indicated that cervical cancer is a disease of the poor and uneducated women. This category of women, especially of rural origin, often find referral to the distant metropolitan Nairobi, a very unwelcome suggestion and the majority may not comply.

Given this background, it is conceivable that the pattern of cervical cancer as depicted by studies from Nairobi may be different from that seen in peripheral facilities. Moreover, there are studies from the rest of the world suggesting changing trends in the pattern of cervical cancer(4,5).

MTRH is a recently established teaching institution and is already witnessing a sharp increase in the patient load as facilities in the western Kenya region begin to refer patients to it. Since this is a regional referral unit, it is hypothesised that, being closer to the rural populations than Kenyatta National Hospital, the pattern of presentation of patients with cervical cancer may be different from that already reported. The objectives of this study were to document the pattern of presentation of cervical cancer in this unit by determining the socio-demographic characteristics of patients with cervical cancer, the histopathologic picture of the disease and also to explore aspects of health care seeking behaviour of the patients.

MATERIALS AND METHODS

The study was carried out at the gynaecological unit of MTRH in Eldoret, Kenya. This is a 400 bed hospital with about 50 beds for the gynaecological patients. MTRH is Kenya's second teaching hospital and before being upgraded to a teaching and referral hospital in 1997, was operating as a district hospital.

However, since the upgrade, there has been an increase in referrals from the western Kenya region seeking specialist care at the hospital.

This was a cross-sectional descriptive study involving patient information questionnaire, patient clinical evaluation and his pathologucal report on tumour biopsy material carried out between May 1998 and November 1999. Consecutive patients with cervical cancer presenting at the gynaecology unit were included in the study. Patient interview using a predesigned questionnaire and clinical evaluation of the patients including examination under anaesthesia for the purpose of staging the tumour and obtaining a biopsy were carried out by one of the authors(EOW). Histopathological examinations of the biopsy specimens were done by the other author (NGB). Routine procedures of examination under anaesthesia and handling of the biopsy specimen were followed. Due to unavailability of a cystoscope, the bladder mucosa was not evaluated. In staging, the International Federation of Gynaecologists and Obstetricians (FIGO) classification was adhered to.

The study was approved by the MTRH Ethics Committee. Furthermore, the patients were appraised of the purpose of the study and were only included after signing a consent form. The study involved procedures usually applied in the routine evaluation of a suspected case of cervical cancer. Finally, patients were offered available treatment appropriate for the tumour stage. The data were entered, cleaned and analysed using Stata Version 4 statistical package. The result were presented as simple tables.

RESULTS

Forty two patients, seen during the study period, were included in the study and form the basis of this report.

Table 1

Selected socio-demographic characteristics of the patients

Age (years)	Proportion (%)	
upto 25	2.4	
26- 35	14.3	
36 - 45	23.8	mean age 49.4 yrs (95% CI: 45.4,53.3) s.d. 12.7 yrs, range 24 -80 yrs
46 - 55	23.8	
56 - 85	35.7	
Total (n = 42)	100.0	
Marital status		
Type	%	
Never married	0.0	
Monogamous	57.1	
Polygamous	42.9	
Total (n = 42)	100.0	
Confirmed pregnancies		
Category	%	
None	2.4	
1 - 4	21.4	
5 and more	76.2	
Total (n= 42)	100.0	
Contraceptive ever-use		
Category	%	
No	78.0	
Yes	22.0	
Total (n = 42)	100.0	

Table 1 shows selected socio-demographic characteristics of cervical cancer patients. The mean age of this group of patients was 49.4 years (95% confidence interval: 45.4, 53.3), the youngest patient was 24 years while the oldest was 80 years. All the patients had been married at one time or another, with 42.9% having been in polygamous unions. The majority (76.2%), reported having had five or more children. Contraceptive ever-use was low, reported by only 22% of the patients.

Table 2

Duration of symptoms on presentation at MTRH

Duration (months)	Proportion (%)
Upto 3	14.3
4 - 6	35.7
7 - 9	14.3
10 - 12	23.8
13 - 24	11.9
Total (n = 42)	100.0

Mean duration 8.2months (95% CI:6.5,9.8) s.d. 5.4, range 1 - 24mths

Table 2 shows that the mean duration of symptoms at presentation was 8.2 months (95% confidence interval:6.5, 9.8 months). This constitutes a substantial delay in seeking health care. The longest duration of illness was two years.

Table 3

Who discussed illness with first

Category	Proportion (%)
Friend	7.3
Female relatives	41.5
Husband	48.8
Health workers	2.4
Total(n =41)*	100.0

* 1 missing value.

Table 3 shows that relatives of the patients were the first to be told about the symptoms the patients were experiencing. 90.3% of cases first discussed the symptoms with either female relatives or their husbands. Discussion of symptoms of the disease was mostly likely to occur with husbands - reported by 48.8% of cases.

Table 4

Facility where health care was first sought

Type of facility	Proportion (%)
Trad. medicine practice	9.8
Private practice	26.8
Dispensary/H. centre	39.0
Hospital	24.4
Total (n = 41)*	100.0

* 1 missing value.

Table 4 shows that once the patients decided to seek health care, they were most likely to visit the dispensary or health centre first - reported by 39% of cases. The next most popular facility was the private medical practitioner used by 26.8%, followed by hospitals used by another 24.4%. Traditional medicine practice was the least frequently visited facility.

Table 5

Tumour state and macroscopic appearance

Stage	Proportion (%)
1	4.8
2	28.6
3	50.0
4	16.6
Total (n=42)	100.0

Macroscopic appearance

Category	Proportion(%)
Cauliflower	31.1
Ulcerating	14.3
Infiltrating	2.9
Ulcerating/infiltrating	31.4
Cauliflower/ulcerating	14.3
Total (n= 42)	100.0

Table 5 shows the clinical stage of tumour at first presentation at MTRH. More than 95% of the cases had tumour stage 2 and above. Two patients had tumour stage 1B, three patients had stage 2A, while the rest of the 42 had tumour stage 2B and above. At MTRH radical hysterectomy is the only available modality of treatment. Of the five patients who could be offered definitive treatment at MTRH, four had radical hysterectomy and are still being followed up. The rest of the patients were recommended for radiotherapy at Kenyatta National Hospital (KNH) or for hospice care by the Eldoret Hospice team if they were stage 4. It is not known what proportion of these patients actually accessed the care facilities they were referred to, particularly those referred for radiotherapy.

Table 6

Histopathological picture

Cell type	Proportion (%)
Squamous cell carcinoma	80.9
Adenocarcinoma	11.9
Anaplastic / undifferentiated	7.2
Total (n=42)	100.0

Tumour cell differentiation

degree of differentiation	proportion(%)
well differentiated	9.5
moderately differentiated	35.7
poorly differentiated	31.0
undifferentiated/ anaplastic	7.1
differentiation not reported	16.7
Total (n = 42)	100.0

The predominant macroscopic picture was that of an ulcerating tumour occurring in upto 60% of cases with varying degrees of infiltration and fungating appearance. The other common presentation was cauliflower or fungating tumour occurring in upto 51.4% of cases with varying amounts of concomitant ulceration.

Table 6 shows that 80.9% of the patients had squamous cell carcinoma. Moderate and poorly differentiated tumours were predominant - together occurring in 66.7% of all cases.

DISCUSSION

Cancer of the cervix is the commonest genital malignancy in most of the developing world(1-3). Strong causal relationships have been identified with poor socio-economic status, high parity, multiple sex partners and early age at sex debut and more recently persistent infection with human papilloma virus types 16, 18 among others. The objective of this study was to describe the socio-demographic characteristics of the cases of cervical cancer presenting at the MTRH. The study shows that 76.2% of our cases had had at least five pregnancies and 78% had never used a contraceptive. These findings are similar to those reported at the Kenyatta National Hospital (KNH) which is the only public facility with equipment for complete radiation treatment in Kenya(3). The mean age of the patients was 49.4 years with youngest being 24 years and the oldest 80 years. There were equal numbers of premenopausal and post menopausal women seen in this group. These finding are different from those of a previous local study that reported that cervical cancer in the African setting is largely a disease of the premenopausal woman(3). In that study, seventy per cent of the patients were premenopausal. Moreover, previous studies have suggested that cervical cancer may be a disease of two age groups with an earlier peak prevalence age around 35 years and another peak prevalence of around 50 years(6,7). It is however, recognised that this is a much smaller study and it is possible that the previously described age patterns might emerge if the sample size was larger. Polygamous union was reported by 42.9% of the cases. Compared to data from the latest Kenya Demographic and Health Survey which shows that the average rate of polygamy was 16% of currently married women, the rate of polygamy in our study subjects was quite high(8). Moreover, the rate of polygamy reported by currently married women in Kenya has been falling steadily from 30% in 1977(9) 23% in 1989(10) and 19% in 1993(11). Perhaps since our patients tended to be older than reported in previous studies, the high rate of polygamy may be reflecting a cohort effect. That notwithstanding, polygamy is an indirect indicator of the multiplicity of sexual partners these patients had. It is known that the number of sexual partners of the spouse is as important as that of the woman in the causation of the disease.

The mean duration of symptoms at presentation to MTRH was 8.2 months. This is considered a substantial delay in seeking health care. The delay is further evidenced

by the tumour staging at examination under anaesthesia. During this procedure, more than 88% of cases were late or advanced disease that is, tumour stage 2B and above. As a result, these patients could not be offered any definitive treatment at the MTRH but had to be referred for radiotherapy at KNH. These findings are similar to those described by other workers(1-3). As has been alluded to earlier, the proportion of these patients who actually manage to access the radiation treatment facilities at KNH is not known but can only be speculated on to be low considering the distance, the processes and the finances involved.

In this study certain issues that influence health care seeking behaviour were further explored. In the dynamics leading to patients achieving access to health care, three delays can be identified. These are: the delay in deciding to seek care, delay in actually going to a health care facility once the existence of the medical problem is recognised and finally the delay in receiving the appropriate care. In this study, the patients were asked who they first discussed their illness with once they realised that they were unwell. More than forty one per cent of the patients first informed their female relatives of their symptoms, while 48.8% first told their husbands. This finding is significant for two reasons. First, it is known that majority of cervical cancer patients are of low socio-economic background and often men control the family finances. As a result, the man would need to be convinced of the import of the wife's condition in order to provide the finances necessary for the patient to go for health care. Secondly, if the husband is aware of the significance of the symptoms of the disease he is likely to encourage more appropriate health care seeking behaviour in the wife. The third delay is also a complex interplay between the awareness of the health care workers about the disease, their ability to make a diagnosis, their knowledge of the treatment and where the facilities are available and hence the referral system.

To assess the potential role of this delay in the overall late presentation of the patients, they were asked to mention the health care facility they first visited once they decided to seek health care. The responses show that the formal public health facilities were visited by 63% of cases, but of these facilities, the dispensary and the health centres were more likely to be used first. Private practitioners were also commonly visited. The popularity of the dispensaries and health centers may be because they are likely to be more accessible in terms of both distance and expenses. One can also speculate that the private practitioners are an important provider of care due to the privacy and personalised care perceived to be associated with them.

Macroscopically, 60% of the tumours were ulcerating and about 51% could be described as fungating or cauliflower. These macroscopic presentations are normally associated with bleeding and/or blood stained discharges which are typically postcoital. These likely presentations should lend themselves to early recognition as both the woman and the husband are likely to be alarmed by them. Moreover, tumour volume or bulk is emerging as an independent prognostic indicator. In several reports the

large volume or bulky tumours have been associated with poorer prognosis after controlling for stage(12,13). In this study, tumour bulk was not specifically assessed but the tumours that were classified, macroscopically, as cauliflower were, generally, bulky.

Microscopically, the picture is similar to what is traditionally known. Cervical cancer usually arises from the transformation zone of the cervix and is commonly a squamous cell carcinoma and occasionally adeno-carcinoma. In our study, about 81% of the tumours were squamous cell carcinoma with about eleven per cent being adenocarcinoma. Adenocarcinomas are commoner in the older age groups and this tallies with the slightly higher rate observed in this study which had a much older population than reported in a previous report(3). In the earlier report alluded to, adenocarcinoma accounted for only four per cent of the tumours. Ojwang(14), looking at the presentation of cervical cancer in the under 35-year old women found adenocarcinoma to occur in 8.3% of the cases. Other studies from both the developed and the developing world indicate a rising trend in the proportion of adenocarcinomas in cancer of the cervix cases - a trend which some attribute to use of hormonal contraceptives among other factors(4,5,15). A potential source of error leading to high proportion of adenocarcinoma is that of misclassification of endometrial carcinoma involving the cervix as adenocarcinoma of the cervix. Adenocarcinoma is also significant in being a tumour with a generally poorer prognosis than squamous cell carcinoma(16). The tumours also showed moderate and poor differentiation in upto 67% of cases, with only 9.5% being well differentiated. Differentiation of tumour cells is also of prognostic significance, with well differentiated tumour conferring good prognosis. Our patients therefore had several poor prognostic factors including late presentation and lack of access to definitive treatment facilities, relatively bulky or cauliflower tumours, high proportion of adenocarcinoma and poorly differentiated tumours.

In conclusion, patients with cervical cancer seen at MTRH present with late disease, are likely to have first discussed their illness with their female relative(s) or their husbands and are likely to have first visited peripheral public health facilities such as dispensaries and health centres. Interventions to improve health care seeking behaviour among cervical cancer patients need to include education of husbands and increase awareness of the disease among private medical practitioners and health workers at dispensary and health center level.

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Letter to the Editor-in-Chief

Dear Sir,

RE: USE OF JOINT REPLACEMENTS IN A DEVELOPING COUNTRY

Huckstep suggests that training of surgeons from poor countries in economically rich countries in techniques like total hip and knee replacements is inappropriate on grounds of limited sterility in operating theatres in the tropics and sub-tropics and the unrealistic cost in a country where even the most basic surgical equipment may be lacking. He also discourages the practice of expatriate doctors doing joint replacements while on short visits of one to two months in developing countries(1). While this view can be justified, on a recent visit to Kenya, I found that joint replacement surgery has become established at the Kenyatta National Hospital, some private hospitals in Nairobi and is being carried out in some mission hospitals outside Nairobi.

For Kenya, then, the issue is not whether major joints should be introduced or not. It is how these joint replacements can be done safely and in a sustained manner.

The main issue raised in this scenario is that of resource availability. A successful joint replacement programme requires a certain level of physical, financial and human resources to deliver in terms of quality and safety. Ideal physical environment includes clean air theatres, with laminar flow or use of u-v light, and surgical equipment for both primary and revision arthroplasty. For revision surgery, good laboratory services including bone banking and/or availability of expensive bone substitutes is required. A system of adequate and reliable financing is required to procure implants, ensure availability of antibiotics and theatre supplies. Human resources required include appropriately trained and experienced surgeons, nurses, physiotherapists and occupational therapists. There should be adequate provision for rehabilitation facilities which may include modification of the home environment. It therefore requires a multi-disciplinary approach to achieve proper patient rehabilitation.

Quality issues are a major concern, especially as there is no reliable documentation of patient outcomes in the developing countries. Outcome measures derived from good centres in developed countries may not be applicable in developing countries. There is therefore need to locate the arthroplasty services in centres which have adequate resources to set and document local standards.

Choice of implants is extremely important in patient outcomes. Long-term data from Scandinavian arthroplasty registers (Norwegian and Swedish) confirm that selection of prosthesis is the factor which has the greatest influence on long term survival(2). There are numerous prostheses available and it is pertinent that mechanisms be put in place to select appropriate implants in a developing country. Cost and long term follow up are the main criteria to be followed.

This was shown in a study of 62 different primary total hip replacement implants, available in the UK, manufactured by 19 different companies(3). Only 30% had any results published in peer-reviewed journals. Prices ranged from £250-2000 and the two cheapest prostheses – Stanmore and Charnley, had the longest follow up. There was little or no scientific evidence that the newer, more expensive implants are better than established designs. Designs that look alike do not necessarily have the same performance as has been demonstrated with the 3M Capital hip prosthesis. This design was based on the Charnley hip prosthesis, with slight modifications for theoretical advantages. This included a modular design, titanium implants with lower modulus of elasticity, broad tapering shoulders for more even stress distribution, a modular titanium head with excellent resistance to wear and a methyl methacrylate insert at the tip of femoral prosthesis to avoid mal-alignment. Massoud *et al*(4) reports early failure in this implant. Seventy six patients with a mean follow-up of two years showed 16% definitely loose and 10% possibly loose implants.

Whereas Professor Huckstep's concerns are understandable, if a developing country wishes to set up an arthroplasty service, great care should be taken to get it right. There is need to have mechanisms set up to choose appropriate implants. These should take into account cost and preference should be given to implants with good results in published, peer-reviewed long term clinical trials. Services should also, where possible, be centralised in order to make maximum use of scarce resources and to develop experience in such procedures. This will improve quality of the arthroplasty service, training and allow audit. There is need to develop capacity for revision surgery to deal with complications and failed joint replacements.

Yours sincerely.

P.K. Oroko, MMed (Surg), FRCS (Ed), FRCS (Tr & Orth), Locum Consultant Orthopaedic Surgeon, Hairmyres Hospital, East Kilbride G75 8RG, United Kingdom.

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