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Evaluation of Breast Disorders among Patients Undergoing Mammography at Jaramogi Oginga Odinga Teaching and Referral Hospital in Kisumu County

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Abstract:
Background: The complete mammographic pattern of breast disorders in Kenya largely remains unknown. Recently a number of private health facilities and charities in Kenya have embarked on breast health awareness campaigns that mainly revolve around the month of October every year. During such campaigns, both men and women of various age groups and diverse backgrounds do turn up for physical screening and those that are at risk of breast cancer undergo baseline mammographic examinations.
Objectives:The study evaluated the pattern of breast disorders among patients that sought mammography services at the Jaramogi Oginga Odinga Teaching and Referral Hospital in Kisumu county. The specific objectives of the study included; to analyze the socio-demographic characteristics of patients undergoing mammography, determine the most prevalent mammographic finding among the patients, and lastly document the distribution pattern of disorders among patients undergoing mammography.
Methods: The data collection method employed during the study was observational checklists completed by the researcher pre and post the mammographic procedure. The study collected data from 30 patients in Jaramogi Oginga Odinga Teaching and Referral Hospital in Kisumu County. The data was analyzed using MS Excel after which a combination of descriptive statistics and graphical presentation of the data was then undertaken.
Results: The majority of respondents had attained primary level of education, which made up to 50% (n=15), while those with secondary level of education comprised 34% (n=10) but a paltry 17 % (n=5) had attained tertiary level of education (colleges and university). Most of the respondents undergoing mammographic examinations were 35years and above which had 84% while those below 35years were only 16%. About 67% (n=20) respondents' mammographic results showed suspicious features warranting the need of core biopsy of the breast lesion to rule out the cancerous cells. This was followed by intraductal papilloma which 13% (n=4) respondents had and then Paget's disease of the nipple which had 3 respondents. As per the study findings, most respondents were female with a percentage of 97% (n=29) while 3% (n=1) were male. The leading symptom was breast lump taking bigger percentage of 35% and then followed by painful lumpiness of the breast.
Conclusion and Recommendation: Most of the 30 cases sampled all of them yielded positive findings to one form of breast disorder or the other. Further to this, the disproportionately low number of male patients seeking mammography services at the Jaramogi Oginga Odinga Teaching and Referral Hospital warrants step up of health communication strategies to positively impact on breast health seeking behavior among residents of Kisumu and its environs. Contrary to a number of past research studies, the number of mammographic referrals from far-flung areas from the hospital far outweighed the number of cases from the immediate catchment areas to the facility.

Keywords: *Mammography findings in Kenya, breast disorders in Kenya*

1. Introduction and Background Information

In recent years, the rapid diagnosis of breast disorders by either mammography or ultrasound tends to assuage the fear of going for breast cancer screening as opposed to sometimes back when the diagnosis of breast cancer was akin to a death sentence (Toghill & Gray, 2000).

By highlighting the pattern of breast disorders at mammography, this research will go a long way in promoting the implementation of interventions geared at enhancing breast healthcare in Kenya.

1.1. Problem Statement

The complete mammographic pattern of breast disorders in Kenya largely remains unknown. Recently a number of private health facilities and charities in Kenya have embarked on breast health awareness campaigns that mainly revolve around the month of October every year. During such campaigns, both men and women of various age groups and diverse backgrounds do turn up for physical screening and those that are at risk undergo baseline mammographic examinations.

Browse (1997) notes that there are over one million of new breast cancer cases each year worldwide. Breast cancer is one of the most commonly encountered malignancies in women and it comprises about 18% of all female cancer.

The vast majority of benign looking breast disorders eventually, turn malignant, as most clinicians tend not to bother investigating their clients further. Randomized controlled trials have shown that screening by mammography can greatly circumvent mortality from breast cancer by almost half of women aged over 50 years (Browse & Browse, 2005).

1.2. Broad Objective

Evaluate the pattern of breast disorders among mammography patients at Jaramogi Oginga Odinga Teaching and Referral Hospital.

1.3. Specific Objectives

i. Determine the socio-demographic characteristics of patients undergoing mammography at Jaramogi Oginga Odinga Teaching and Referral Hospital.
ii. Assess the pattern of findings among patients undergoing mammography at Jaramogi Oginga Odinga Teaching and Referral Hospital.
iii. Determine the most prevalent breast disorder among patient undergoing mammography at Jaramogi Oginga Odinga Teaching and Referral Hospital.

1.4. Research Questions

i. What are the socio-demographic characteristics of patients undergoing mammography at Jaramogi Oginga Odinga Teaching and Referral Hospital?
ii. What is the pattern of disorders among patients undergoing mammography at Jaramogi Oginga Odinga Teaching and Referral Hospital?
iii. What is the most prevalent breast disorder among patients undergoing mammography at Jaramogi Oginga Odinga Teaching and Referral Hospital?

2. Literature review

2.1. Introduction

Mammography is a radiological type of imaging that uses a low-dose x-ray system to examine the breast in women aged over 50 years. Younger women have dense breast tissue that renders mammograms very difficult to interpret as opposed to when the postmenopausal tissue becomes involuted hence less dense that abnormalities become more obvious (RadiologyInfo, 2012).

2.2. Common Breast Disorders

Breast cancer is one of the most common cancer in women that portrays a variable number of histological subtypes that may be so cellular, invasive, and fast growing that it clinically makes it indistinguishable from acute inflammation (Moller, Ranstam, and Collaborative group on hormonal factors in breast cancer, 2002)

Male breast cancer is uncommon condition except there is little public awareness of the condition and presentation may be poor because male breast are small (Browse & Browse, 2005).

Women with family history of benign proliferative disease without cellular atypia have increased risk of breast cancer compared to those with non-proliferative breast disease (Browse, 1997).

2.3. The Most Prevalent Breast Disorder

The incidence of breast cancer is increasing worldwide, especially within the developing countries. Ferlay et al. (2010) asserts that in Kenya, 80-90% of the women with breast cancer present with advanced forms of the disease. Breast cancer is so cellular that at times it is indistinguishable from acute inflammation (Ojiambo, 2013).

2.4. The Pattern of Breast Disorders among Patients Undergoing Mammography

The larger number of screening mammography evaluation of asymptomatic female compared to diagnostic mammographic evaluation for symptomatic female shows that positive impact. The mean age for malignant lesion is 44 to 65 years while the mean age for other breast disorder is 34 to 70 years. As non-specific masses are the most common radiographically observed lesions, hospitals equipped with sonography and biopsy facilities that complement mammography are better suited for thorough evaluation (Ganz, Rowland, Desmond,Meyerowitz & Wyatt, 1998).

2.5. Research Design
The was a cross sectional descriptive survey as it is easy to execute (Republic of Kenya, 2009).

2.6. Setting
The research was carried out at Jaramogi Oginga Odinga Teaching and Referral hospital in Kisumu county Nyanza province of Kenya.

2.7. Study Population
The study population comprised mammography patients at Jaramogi Oginga Odinga Teaching and Referral Hospital

2.8. Sampling Method
Utilization of convenience sampling method in selecting the study participants from among the patients that underwent mammographic examinations at the Jaramogi Oginga Odinga Teaching and Referral hospital was undertaken because of the limited time of data collection.

2.9. Data Collection
The researcher utilized a checklist while collecting data.

2.10. Data Analysis
Data was analyzed by use of the MS Excel to generate frequency tables, graphs and pie charts.

2.11. Ethical Consideration
While carrying out the study, the researcher maintained privacy and confidentiality on the information obtained during the study. The respondents signed the informed consent before commencement of the study. Permission was obtained from the National council of cience and Technology the director (KMTC) in liaison with the Medical Superintendent of Jaramogi Oginga Odinga Teaching and referral hospital.

- Study Findings
- Socio- Demographic characteristics of the respondents.

2.12. Respondents Sex
As per the study findings, most respondents were female with a percentage of 97% (n=29) while 3% (n=1) were male.

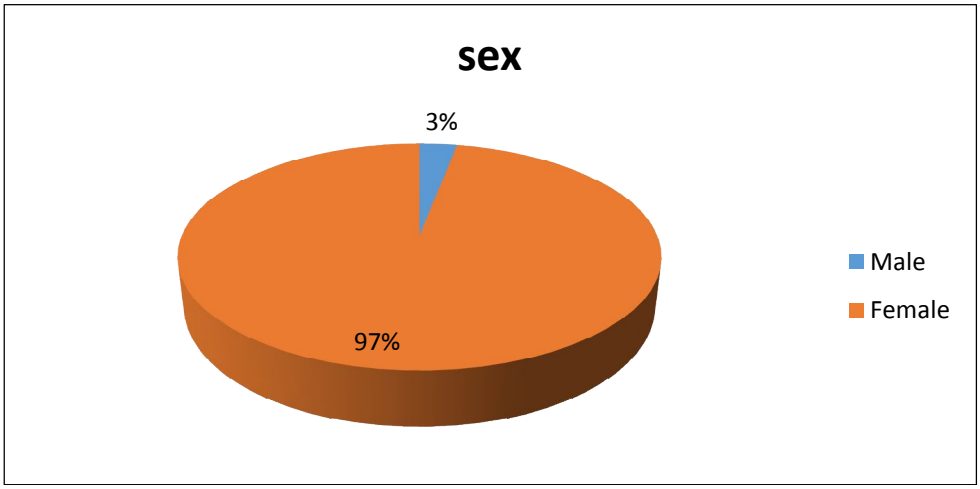

Figure 1: Sex of the respondents.

2.12.1. Age of the Respondents
This shows that the majority of the respondents undergoing mammographic examinations were 35years and above which had 84% while those below 35years were only 16%.

Category	Frequency	Percentage
Below 35years	5	16%
Above 35years	25	84%
Total	30	100%

Table 1: Age of the respondents

2.13. Level of Education of the Respondents

Majority of respondents had attained primary level of education, which made up to 50% (n=15), while those with secondary level of education comprised 34% (n=10) but a paltry 17 % (n=5) had attained tertiary level of education (colleges and university).

Category	Frequerncy	Percentage
Primary	15	50%
Secondary	10	33%
Tertiary	5	17%
Total	30	100%

Table 2: Level of education of the respondents

Respondents who were referral cases were the majority making up to 60% while those who resided close to the hospital were the minority with 40%.

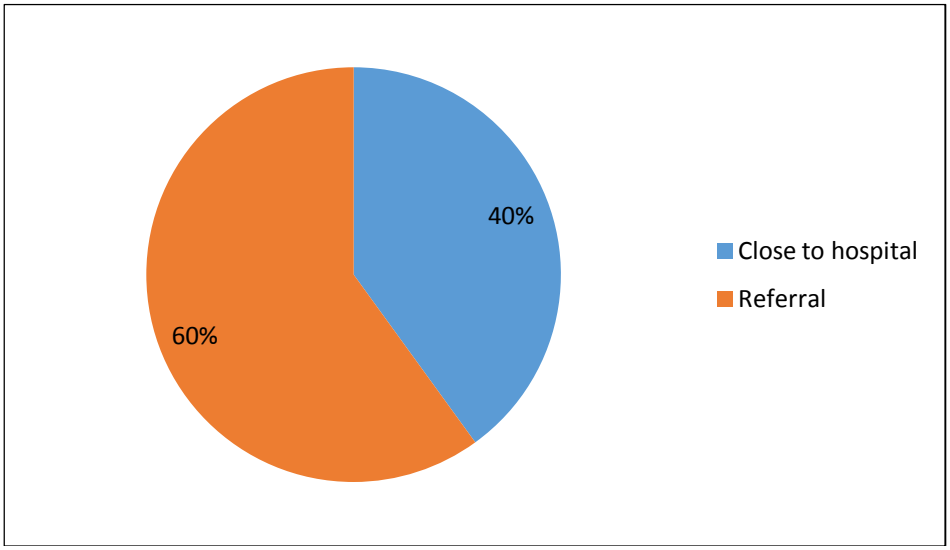

Figure 2: Respondents residential location

2.14. Data Showing the Most Prevalent Breast Disorder

The graph suggest that features suspicious of adenocarcinoma is the most prevalent breast disorder with 67% (n=20) respondents mammographic results. This was followed by intraductal papilloma which 13% (n=4) respondents had and then Paget's disease of the nipple which also had 3 respondents. Fibrocystic breast change had only two respondents with only one respondents having gynaecomastia.

Category	Frequency	Percentage
Adenocarcinoma	20	67%
Intraductal papilloma	4	13%
Paget's disease of the nipple	3	10%
Fibrocystic change of breast	2	7%
Gynaecomastia	1	3%
Total	30	100%

Table 3: prevalence of breast disorders detected at mammography

The frequency table shows the distribution pattern of symptoms among patients that presented with breast disorder at the Jaramogi Oginga Odinga Teaching and Referral Hospital. The leading symptom was breast lump taking bigger percentage of 35% and then followed by painful lumpiness of the breast.

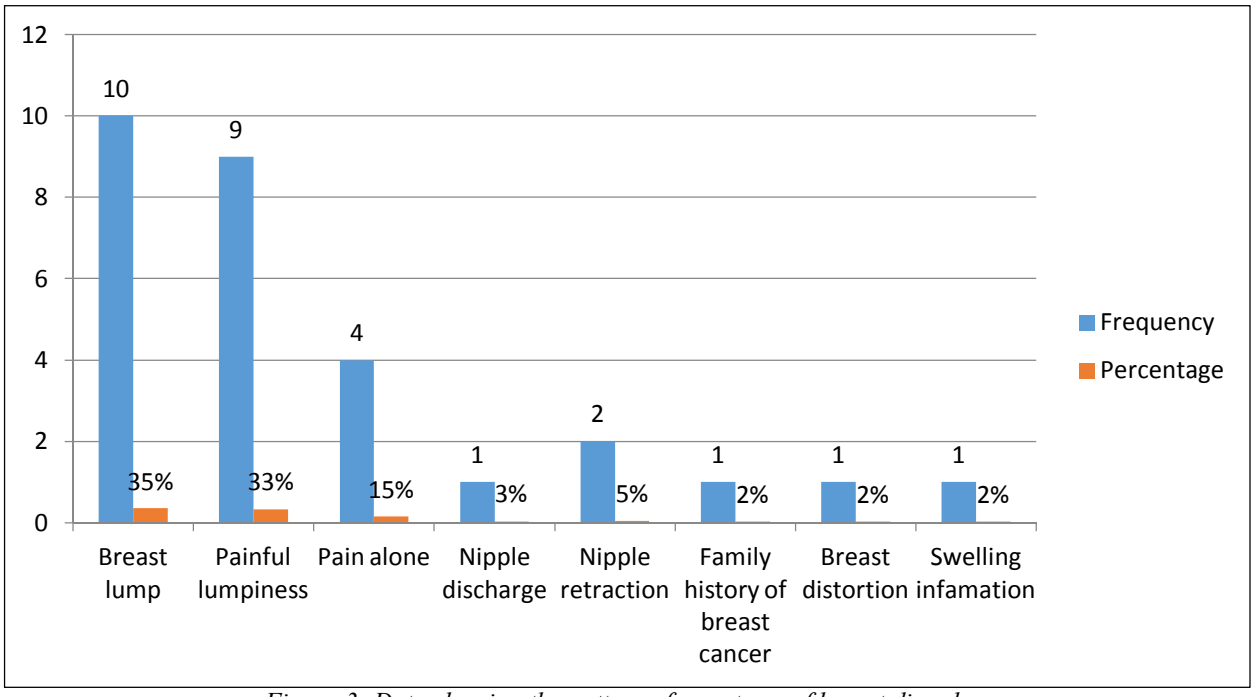

Figure 3: Data showing the pattern of symptoms of breast disorder.

3. Discussion, Conclusion, and Recommendations

3.1. Discussion

From the study undertaken at Jaramogi Oginga Odinga teaching and referral hospital most respondents were female this is because women have dense breast tissue with fatty subcutaneous which makes the breast more susceptible to breast disorder. In addition, surprisingly, all the sampled respondents had positive mammographic findings. The findings concur with (Browse & Browse, 1997) stating that men only seek mammography upon physician advice. The fact that all the sampled study subjects had positive mammographic findings suggests that the clients sought mammography on the basis of breast symptoms.

According to Parkin et al (2005) majority of women going for mammography are aged between 35 to 70 years. Women below that age group may not undergo mammography due to restraints as per individual institutional policy or they have not experienced significant sign of breast disorder. From the data collected at Jaramogi Oginga Odinga Teaching and Referral hospital, the researcher found out that Parkin's findings holds true as only five respondents out of the 30 sampled were below the age of 35 years.

From the data collected, most women that underwent mammography at the Jaramogi Oginga Odinga teaching and referral hospital are semi-illiterate having attained only primary level of education.This could mean that they are probably unaware of the importance of breast self-examination or the need to undergo early mammographic screening while their more literate counterparts may seek early screening for breast cancer.

Browse & Browse (1997) states that people who live near the hospital or facility that offer mammography tend to know about the existence of the mammography unit and they usually go for screening and general check up. However, our study does not support this because from the findings, the referral cases from far-flung areas from Jaramogi Oginga Odinga Teaching and Referral Hospital outweighed those from the areas proximal to the mammographic facility.

3.2. Conclusion

It is concluded that most of the patients come for mammography at the Jaramogi Oginga Odinga Teaching and referral hospital with features of advanced breast disease considering that out of the 30 cases that were sampled all of them yielded positive findings to one form of breast disorder or the other. Further to this, the disproportionately low number of male patients seeking mammography services at the Jaramogi Oginga Odinga Teaching and Referral Hospital warrants step up of health communication strategies to positively impact on breast health seeking behavior among residents of Kisumu and its environs. Contrary to a number of past research studies, the number of mammographic referrals to the Jaramogi Oginga Odinga Teaching and Referral Hospital from far-flung areas from the hospital far outweighed the number of cases from the immediate catchment areas to the facility.

3.3. Recommendation

There is need to conduct further research studies to explore the breast health seeking behavior among the residents of Kisumu and its environs in order to come up with effective health communication strategies and interventions that could scale up the uptake of mammography as a screening tool for breast cancer. Finally, it is imperative to have thorough analysis of the source of mammographic referrals to the Jaramogi Oginga Odinga Teaching and Referral hospital by the health authorities in Kenya with a view of installation of more mammographic units and deployment of radiologists at those areas with higher numbers of breast disorders.

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