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Research Article

Forms of Breast Disorders within Females Visiting Breast Disease Clinic

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Abstract

1.1. Background: Breast disorders, either benign or malignant in nature, are clinically common. The forms of breast disorders vary within different nations.
1.2. Objectives: The goal of the current research study is to explore and observe the forms of breast disease and their correlation with various obtained variables of interest in females visiting the breast disease clinic.
1.3. Methodology: A cross-sectional research study performed at El Sahel Teaching Hospital from 1st of May 2017 till 1st of February 2017. A randomly selected cohort of 500 research subjects of all age categories have been enrolled in the research study. The cases have been cat- egorized according to their clinical diagnosis into 3 classes of breast conditions: normal, benign and malignant. The statistical significance was <0.05.
1.4. Results: breast disorders of benign nature diagnosed among (63%) of cases while breast dis- eases of malignant nature composed of (13.2%). The commonest clinical presentation have been mastalgia and breast mass (39.2%), mastalgia (37.6%), and breast mass only (23.2%). Fibro- adenoma (26.2%) has been the most common benign clinical disease with greatest incidence (76.9%) in the age research group below 20 years. Malignant breast diseases have been more frequent with increasing age. Benign breast clinical disorders and pathological lesions were correlated more with nulliparous females (p<0.001). Breast cancer observed (p <0.001) more frequent in a statistically significant fashion with in lactating females recruited in the research cohort.
1.5. Conclusion: Benign diseases and various disorder of the breast is a popular clinical di- agnosis mostly presented in younger females. Breast malignant disease despite the fact that is clinically diagnosed in lower frequency and mainly presented in older age groups, yet its sig- nificance oblige a meticulous evaluation of females of various clinical presentations particularly that of breast mass only or associated with mastalgia.

Key words: benign breast diseases; malignant breast diseases; mastalgia

Introduction

Breast disorders and diseases are a clinically popular group of illnesses varying from self resolving inflammatory con- ditions to grave invasive forms of malignant disease [1]. Breast disorders and disease spectrum are of increasing research and clinical interest all over the globe. Probably due to raised public awareness of breast malignancy which is one of the most common female population malignant disorders [2].

The major issue of breast disorders and disease are benign breast illnesses which are far more common in many nations particu- larly in the western world, on international basis benign breast disorders represent around 90% of the clinical issues presented in relation to the female breast [3]. Benign breast illnesses and pathological conditions are mainly presented in reproductive age group of females, presenting mainly in the 2nd decade of female life however in the second decade with great possibility for the lesions of benign nature to be well advanced at the 4th and 5th decade of life. Benign breast disorders and illnesses involve a spectrum of pathological and histological categories [4].

Usually categorized into non-proliferative breast conditions, proliferative breast conditions without observed atypia, and pro- liferative breast conditions with observed atypia according to histopathological examination [5]. Additionally fibro adenoma, fibro cystic changes and breast abscess are responsible for the vast majority for breast benign pathological conditions in developing nations. Particular histopathological categories of benign nature

affecting the breast are a predisposing considerable risk issue for later development of malignant breast disease [6].

Nature of breast illnesses and causative factors vary among various nations, racial groups [7]. chiefly common presenting symptom of breast disorders in addition. Clinically palpable breast lumps, at the same time many cases present with nipple discharge, deformity and skin changes. Risk factors identified for benign and malignant breast illnesses involve; nulli parity, young age at first birth and late onset menopause, particularly due to the well known issue of excessive estrogen serum levels [8-10]. Genetic makeup and environmental factors, variability of immune competence and host vulnerability are various factors impacting in breast malignancy development. Breast malignancy is more common in females with a family history of this form of disease and is proven by researchers that particular mutations are responsible for 5% of the breast malignancies [11,12].

Aim of the Work

To verify the forms of breast disorders within females visiting breast clinic in El Sahel Teaching Hospital. By identifying and recording the demographic, personal, obstetrical &gynecologi- cal features of females and its correlation to breast disorders with identification of clinical presenting mode of various divisions of breast disorders.

Methodology

Across sectional research study performed at El Sahel Teaching Hospital breast disease clinic for the period from 1st of May2017 till1st of February 2018. The study involved 500 recruited female subjects selected in a random manner. Inclusive criteria: cases were categorized, in relation to their final clinical diagnosis, into three divisions: 1st;normal breast clinical condition, 2nd; benign breast disorders, that subcategorized into proliferative benign breast disorders involving the following: fibro adenoma, intra- ductal papilloma, non proliferative benign breast diseases involv- ing: breast cyst, fibroadenotic breast changes, fibrocystic breast changes and those with miscellaneous benign breast illnesses in- cluding: mastitis, breast abscess, ductectasia, lipoma, galactocele, fatty necrosis, hematoma, and accessory breast. 3rd; malignant breast illnesswhether1ry or associated 2ry axillary lymph nodes metastatic lesion.

Research Data Components

1. History

demographic data, personal, gynecological and obstetrical his- tory involving menstrual history, age at 1st delivery and lactation.

2. Clinical picture

involving both main patient complaint; mastalgia, lump or lump+mastalgia, and correlated breast symptomatology e.g. nip- ple discharge, retraction, skin changes, and axillary lump.

3. Breast disease confirmation

Clinical final diagnosis obtained from official hospital records be- ing confirmed bysonography, mammogram and/ or cytological assessment either obtained by fine needle aspiration cytology or core biopsy of breast lesion.

Statistical Analysis

Results were analyzed by usage of Statistical Package for Social Sciences (SPSS, version 22). Chisquare test and Fisher's exact test were applied to evaluate the correlations between different ob- tained research study variables. A p value of <0.05 was considered statistically significant.

Results

Five hundred women involved in this study, their mean age + SD was 38.42 + 12.00 years, the median was 39 years. The age range was 13 to 70 years. The most frequent benign breast disorder in the recruited cohort was fibro-adenoma pathological chang- es(26.2%) and breast cyst(8.6%)displayed in (Table 1).

	FREQUENCY	PERCENTAGE (%)
Normal	119	23.8
Benign breast disorders	315	63
Proliferative type of benign breast disease fibroadenoma	131	26.2
Intraductal papilloma	1	0.2
Non proliferative type of benign breast disease CYST	43	8.6
Fibroadenosis pathological changes	23	4.6
Fibrocystic pathological changes	16	3.2
Miscellaneous breast disorders mastitis	28	5.6
Breast duct ectasia	25	5
abscess	24	4.8
lipoma	11	2.2
galactocele	7	1.4
Breast fatty necrosis	4	0.8
Breast hematoma	1	0.2
Accessory breast	1	0.2
Breast cancer	66	13.2
Primary cancer	55	11
Cancer with lymph node metastasis	11	2.2
Total	500	100

Table 1: Concerning malignant breast diseases.

	Final diagnosis						
	normal	Proliferative benign breast lesion	Non proliferative benign breast lesion	miscellaneous	malignant	total	P value
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Age(years)							
<20	1	20	4	1	0	26	
	3.8	76.9	15.4	3.8	0.0	100.	
20-29	13	48	14	23	1	99	
	13.1	48.5	14.1	23.2	1.0	100	
30-39	18	44	18	30	21	131	
	13.7	33.6	13.7	22.9	16.0	100	<0.001
40-49	49	18	31	33	24	155	
	31.6	11.6	20	21.3	15.5	100	
≥50	38	2	15	14	20	89	
	42.7	2.2	16.9	15.7	22.5	100	
Marital sta-tus							
married	113	92	65	99	59	428	
	26.4	21.5	15.2	23.1	13.8	100	
Unmarried	6	40	17	2	7	72	<0.001
	8.3	55.6	23.6	2.8	9.7	100	
smoking							
yes	4	1	4	2	5	16	
	25	6.3	25	12.5	31.3	100	
no	115	131	78	99	61	484	0.081
	23.8	27.1	16.1	20.5	12.6	100	
total	119	132	82	101	66	500	
	23.8	26.4	16.4	20.2	13.2	100	

Table 2: Clear that the frequency of cancer.

Concerning malignant breast diseases, (11%) of recruited sub- jects clinically presented with primary cancerous lesion, and (2.2 %)clinically presented as malignancy with lymph node meta- static lesions. In (Table 2) it is clear that the frequency of cancer breast raised with increasing age and the prevalence was highest (22.5%) among those aged ≥ 50 years, while none the cases less than 20 years of age have been observed to have malignant diseases. Interestingly the prevalence of proliferative benign breast disorders fallen in a significant statistical fashion ($p < 0.001$)with rising age. Additionally breast malignant illnesses prevalence was greater within the married females (13.8%) in comparison to (9.7%) of unmarried females. Conversely the most common conditions among the unmarried females were proliferative be- nign breast disorders (55.6%), in comparison to (21.5%) among the ever married women. No statistically significant correlation is observed between smoking and clinical final diagnosis ($p = 0.081$).

	frequency	percentage
mastalgia and breast mass	196	39.2
mastalgia	188	37.2

Table 3: Frequency of mastalgia and breast mass.

Table 3 reveals and demonstrates the frequency of mastalgia , breast mass separately and in conjunction in which mastalgia and breast mass is the most frequent representing 39.2 %.

Discussion

Breast disorders are common in females because estrogen cycli- cally triggers developmental changes in breasts during reproduc- tive phase of life. Even though benign breast disorders composes the bulk of breast issues however it is ignored class of disorders in view of the fact that breast malignancy is more dangerous. The breast disease clinicis one of the clinics of El Sahel Teaching Hos- pital from which the study cohort is recruited in a random man- ner. The form and distribution of breast disorders and their caus-es differs among various nations and racial groups [12]. In the current research the distributive form of breast disorders within women attending breast care clinic of El Sahel Teaching Hospital women had been observed, hence 63%of cases were diagnosed as benign breast diseases while13.2% found to have breast can- cer, these results are similar to two prior research studies per- formed priorly, contradict other research studies conducted in other countries like India displayed greater percentages of both benign breast diseases;(80.7%), (80,4%) and that of breast cancer (22.2%), (19.6%) consecutively [13,14].

The bulk of benign breast disorders in this research study is fib road enomato us changes (26.2%) which is similar to various research studies such as that performed in India (45%), in Af- rica 45.6% and 52% in another prior research. While the second most common benign breast disease in this study found to be breast cyst (8.6 %), a study performed in Africa ,displayed that breast cyst was the5th benign disease but with a proportion of (14.0%). Mastitis found to be the 3rd most frequent benign breast disorder (5.6%) in the current research study meanwhile it was found in the same study done in Africa to be the 2nd most com- mon benign breast disorder with a proportion of (19.3 %). Fi- brocystic breast pathology in the current research study was the 5th most common benign breast disorder (3.2%) in comparison to other researchers conducted in Pakistan and in Jamaica both reported fibrocystic changes as the most common benign breast disease(BBD) in their series. while other study done in Nigeria found that fibrocystic breast changes to be the 2nd most common BBD (26.3%) [15,16].

Smoking as a risk issue or protective against breast disorders is a matter of debate among various research studies. A prior researc him plied that recent smokers, are at decreased risk for all be- nign breast disorders where smoking tends to lower endogenous estrogen serum levels in comparison to non-smokers, and since fibro adenoma is triggered by estrogen, a correlation between smoking and fibro adenoma to us breast is logical on biological basis [17].

The greatest percentage (31.3%) of smokers in the current re- search study have been observed within those with cancer breast, similarly a research performed in Serbia implied clearly smok- ing as a risk factor for developing cancer breast and revealed that cases that quit smoking over the age of 50 years are at increased risk, on the other hand another research study done among Turk- ish women showed an inverse correlation between smoking and breast malignancy risk. Cigarette smoking could be protective against cancer breast probably due to its anti estrogenic impact but it could evidently raise the risk of other cancer types [18].

Conclusion

The bulk of females clinically complaining of breast issues are di- agnosed usually as benign disorders. The proliferative conditions including fibro adenoma are the most common ones and affect- ing mainly younger age groups. Breast cancer constituting 13.2% of breast diseases is diagnosed mainly among older age groups >50 years. Mastalgia and mass are the commonest presentation of all breast diseases and need to be thoroughly investigated to exclude malignancy.

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