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Benign Breast Disease Is Need Follow Up?

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Abstract

Background: The vast majority of the lesions that occur in the breast are benign. Much concern is given to malignant lesions of the breast because breast cancer is the most common malignancy in women in Western countries; however, benign lesions of the breast are far more frequent than malignant ones .With the use of mammography, ultrasound, and magnetic resonance imaging of the breast and the extensive use of needle biopsies, the diagnosis of a benign breast disease can be accomplished without surgery in the majority of patients. Because the majority of benign lesions are not associated with an increased risk for subsequent breast cancer, unnecessary surgical procedures should be avoided

The objective of this study is to:

1. Evaluate the benign breast disease in Balad city and its percentage.
2. Advice those women who need fallow up if there is risk of cancer.

Patient and methods: Prospective study of 123 patient with breast lump during period from October 2019 to July 2020 in Balad city.

Result: The highest percent of this study is fibroadenoma (34.2%) and then fibrocystic disease of the breast (28.5%) and then ductectesia and breast abscess (12.2%) for each. Others: lactating adenitis (5.69%), granelomatous mastitis (3.25%), tubular adenoma (2.43%), fat necrosis and lipoma (1.6%) for each, Cavernouse heamangioma and Benign phyloid tumor and Seclerosingadenitis (0.8%) for each.

Conclusion: All women need to be alert to any changes in their breasts that are not normal . Increased surveillance following a benign breast biopsy is necessary because of the increased need for subsequent biopsy or risk of cancer development.

Recommendation: Any breast disease should be evaluated for establishing the nature of disease and the way of follow up. Early detection of any abnormality in the breast by teaching women about breast self-examination. Patients with benign lesions in which there is risk of malignancy needs specific investigations like fibrocystic disease and papallomatosis.

Keywords: Breast disease, benign breast disease, breast lesions and follow up

Introduction

As a secodary sextual organ: The female breast undergoes striking changes at the menarche and menopause. in addition it is subjected to a regular pattern of growth and involution with every menstrual cycle[(1)]. These physiological disturbances contribute to a varies of benign breast disorders which are a frequent source of anxiety and discomfort[(1)]. A normal breast may feel lumpy from mammary glands and other tissues lying under the skin. The breast goes through many normal changes. Hormonal changes may make the breast Tender and swell with fluid before menstruation. The breast also change as the weight changes or as the women grows older[(2)]. Most benign neoplasim of the breast would have little clinical importance if it were not forming difficulty in differentiating them from cancer[(3)].

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Breast lumps are a thickening of breast tissues commonly found in women of all ages some are easily detectable through touch while others are not visible except through mammogram and ultra sound study[4]. Women should be aware of lumps in the breast. Benign breast lumps are not normal .They usually do not require extensive treatment since their cells will not spread outside the breast .

Types of benign breast lumps:

Fibrocystic disease[5]: The fibrocystic changes of the breast happens each month as the womens body prepares for pregnancy when there are changes occurring in the breast and uterus. The changes that occur in the breast are not really a disease they are called a fibrocystic condition or fibrocystic changes in the breast. This fibrous tissue may become hard and rubbery during menstruation and may feel very different and cause pain just before menstruation.

Fibroadenoma: It is a very common lump found in women of all ages. Treatment requires removal by excision biopsy[2]. The discovery of a breast mass either self-detected or identified by a clinician, Many women have breast symptoms-swelling and tenderness, nodularity, pain, palpable lumps, nipple discharge, or breast infections and inflammation. Fortunately, relatively few have breast cancer[2]. The challenge for Physicians must distinguish benign breast conditions from malignant ones, and know when to refer the patient to a specialist. Making such discriminations is not easy, as the conditions are diverse and vary in presentation. Any woman have symptoms of breast disease, but few have cancer. Yet these symptoms are understandable a source of great concern for women.[2,3]

Aims and objectives of study are to

1. Evaluating the benign breast disease in Balad city and its percentage
2. Advicing those women who need fallow up if there is risk of cancer

Literature Review

Presentation of Benign Breast Disease

Physiologic swelling and tenderness, nodularity, breast pain, palpable breast lumps, nipple discharge, breast infections and inflammation. This article presents an approach to benign breast conditions for the primary care physician, including their diagnosis, management, and appropriate referral. A systematic approach and a careful history and physical examination will simplify this seemingly complicated group of disorders.

Classifications

A-Pathologic classification

1- Non proliferative lesions
Cysts, mild hyperplasia of the usual type, epithelial-related calcifications, fibroadenoma and Papillary apocrine change.
2- Proliferative lesions without atypia
Sclerosing adenosis, radial and complexing sclerosing lesions, moderate and florid hyperplasia of the usual type and intraductal papilloma.
3- Atypical proliferative lesions
Atypical lobular hyperplasia and atypical ductal hyperplasia.

B-Clinical classification

Physiologic swelling and tenderness, nodularity, pain, palpable lumps, nipple discharge and breast infections and inflammation.

Lumps: benign breast condition often causes a lump. It may or may not feel tender. A woman might find it while showering or during her other daily activities, or when checking her breasts or under her arms during a breast self-exam. Sometimes her doctor or nurse finds it during a breast exam[6]**.**The younger a woman is, the more likely it is that a single breast lump will be benign. The most common benign breast lumps are fibroadenomas and a combination of fibrosis and cysts that is sometimes called fibrocystic changes. Although most lumps aren't breast cancer, there is always a chance that a single lump may be breast cancer, even in a younger woman. No matter what age a woman is, lumps and other changes must be checked to be sure they are not breast cancer. Having many lumps in both breasts is most often caused by the combination of fibrosis and cysts (sometimes called fibrocystic changes)[7] Breast lumps, like other symptoms, have to be

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considered along with other symptoms a woman at the same time may be having. For example, a new, tender lump that comes up as skin redness and a fever could be a sign of a breast infection. Still, any new lump or other change should be checked by a doctor or nurse.

Skin Thickening and/or Redness of an area of skin on the breast can also have different causes. Inflammation of the breast, known as mastitis, is common in women[8] who are breastfeeding and is usually caused by an infection. Doctor or nurse have to check any new redness or thickening because a special type of breast cancer. (inflammatory breast cancer) can look a lot like an infection, follow up is very important[4].

Breast pain: women have breast pain or discomfort that is related to their menstrual cycle often goes away once menstruation end. Many women with fibrocystic changes have cyclic breast pain. It thought to be caused by changes in hormone levels. Some benign breast conditions, such as breast inflammation (mastitis) may cause a more sudden pain in one spot[8].

Nipple Discharge: A discharge (other than milk) from the nipple may be alarming, but in most cases it is caused by a benign condition. As with breast lumps, the younger woman is, the more likely that the condition is benign. In benign conditions, a non-milky discharge is usually clear, yellow, or green.[9]. If the discharge contains blood likely to be cancer, so it is a reason for concern and more testing. If the discharge is coming from more than one breast duct or from both breasts it is often from a benign condition such as fibrocystic changes or duct ectasia. If the discharge (bloody or non-bloody) is from a single duct, it can be caused by a benign condition like intraductal papilloma or duct ectasia but it can also be caused by a cancer. so you should see a doctor right away. A milky discharge from both breasts (other than while pregnant or breastfeeding)[2]·sometimes can happen in response to the menstrual cycle. It can also be caused by an imbalance of hormones made by the pituitary or thyroid gland , or even caused by certain drugs. Again, benign conditions are much more common than breast cancer.

Physiologic Swelling And Tenderness

Most women in their reproductive years experience varying degrees of breast swelling, fullness, or tenderness[9], which may be premenstrually and cyclic, physiologically and hormonally mediated. Physical examination reveals nodularity, lumpiness, or tenderness. Follow up is important to see the nature of the lumpiness

Nodularity is lumpiness of the breast with varying degrees of pain and tenderness. The symptoms are most prominent about 1 week before menstruation and subsequently decrease. Physical examination may reveal an area of nodularity most often in the upper outer quadrant of the breast. If the changes are symmetric (the same in both breasts), they are rarely pathologic [10].

Fibroadenomas are benign tumors made up of both glandular breast tissue and stromal(connective) tissues. They are most common in young women in their 20s and 30s, but they may be found in women of any age. Fibroadenomas sizes are varies from too small (microscopical) to several inches, round and have borders that are distinct from the surrounding breast tissue. They often feel like a marble within the breast. You can move them under the skin and they are usually firm and not tender[6]. Fibroadenomas can be diagnosed by Fine Needle Aspiration or core needle biopsy. Most fibroadenomas look the same all over when seen under a microscope and are called simple fibroadenomas. But some fibroadenomas contain other components (macrocysts, sclerosing adenosis, calcifications, or apocrine changes). These are called complex fibroadenomas[6,7].

Sometimes one or more new fibroadenomas grow after one is removed. This means that another fibroadenoma has formed—it does not mean that the old one has come back.

Phyllodes Tumors also spelled phylloides[6,10] tumors are rare breast tumors that, like fibroadenomas, contain 2 types of breast tissue: stromal (connective) tissue and glandular (lobule and duct) tissues. They are most common in women in their 30s and 40s, but they may be found in women of any age. The tumors are usually felt as a painless lump, but some may be painful. They may grow quickly and stretch the skin. They are often hard to tell from fibroadenomas on imaging tests, or even with fine needle or core needle biopsies. Under a microscope, the main difference between phyllodes tumors and fibroadenomas is that phyllodes tumors have an overgrowth of connective tissue. Phyllodes tumors (even benign ones) can recure after removed without taking some of the normal tissue around them . so they are treated by removing 1 to 2 cm (about ½ to ¾ inch) of normal breast tissue around it[11].

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Malignant phyllodes tumors do not respond to hormonal therapy and are radiational therapy or the chemotherapy drugs which are normally used for breast cancer[11] . Therefore tumors are treated by removing them along with a wider margin of normal tissue, or by mastectomy (removing the entire breast) if needed.[11]. Because these tumors can recur, close follow-up with frequent breast exams and imaging tests are usually recommended after treatment.

Intraductal Papillomas are benign tumors that grow within the breast ducts. They are wart-like growths of gland tissue along with fibrous tissue and blood vessels (called fibrovascular tissue) [3,11]. Solitary intraductal papillomas are single tumors that often grow in the large milk ducts near the nipple. They are a common cause of clear or bloody nipple discharge, especially when it comes from only one breast. They may be felt as a small lump behind or next to the nipple.[11] They do not raise breast cancer risk unless they have other changes, such as atypical hyperplasia. These tumors are less likely to cause nipple discharge. Multiple papillomas are linked to an increased risk of breast cancer. Papillomatosis is a type of hyperplasia in which there are very small areas of cell growth within the ducts. This is also linked to a slightly increased risk of breast cancer[12]. The usual treatment is to remove the papilloma and a part of the duct it is found in.

Fat Necrosis and Oil Cysts are happen when an area of the fatty breast tissue is damaged, usually as a result of injury to the breast, after surgery or radiation therapy. As the body repairs the damaged tissue, it is replaced by firm scar tissue. A needle biopsy, or sometimes an excisional biopsy, may be needed to learn if cancer is present[10]. Fat necrosis is more common in women with very large breasts. It does not increase a woman's risk of developing breast cancer.

Mastitis is inflammation of the breast. It is most often caused by a breast infection that affects women who are breastfeeding, but it can happen in any woman. A break in the skin or an opening in the nipple can allow bacteria to enter the breast duct, [8].The body's white blood cells release substances to fight the infection leading to swelling and increased blood flow. The area may become painful, red, and warm to the touch. Other symptoms can include fever and a headache. Mastitis is treated with antibiotics. Mastitis does not raise a woman's risk of developing breast cancer[12].

Breast Abscess: Inflammatory breast mass that drains a purulent material[6,13] either spontaneously or on incision by surgery or by using a needle guided by ultrasound. Primary breast abscess occurs spontaneously**,** while secondary breast abscess secondary to breast cancer[12], post-radiation or post-elective breast procedure.

Duct Ectasia: Also known as mammary duct ectasia[13], is common in women over 50. It occurs when a breast duct widens and its walls thicken then blocked and lead to fluid build-up. Often, this condition causes no symptoms and is found on biopsy. Less often, duct ectasia may cause a sticky green or black discharge which is often thick. breast tissue may be tender and red. The nipple may be pulled inward[13].

Hamartomas are benign tumors composed primarily of dense, fibrous tissue with variable amounts of fat and associated ducts[2].

Hematomas are collection of blood in the breast tissues give rise to a lump with or without overlying brusis it is difficult to diagnosis correctly unless it is biopsied[2].

Hemangiomas are rare vascular tumours of the breast. Classified as either angiosarcomas or haemangiomas[2,10]. Cavernous haemangiomas are the most common.

Adenomyoepithelioma is a rare, benign proliferative tumor. It usually presents as a solitary unilateral painless mass at the periphery of the breast. It has a potential for recurrence. Accurate diagnosis and differentiation from more aggressive tumors are important[2,10], and local excision with safe margins usually leads to a benign course.

Neurofibromas arise from elements in the peripheral nervous system and are rarely detected in the breast. Most common type is type 1. They can show variable amounts of myxoid change, which affect their radiological findings[10].

Lipomas are benign tumors composed of mature fat, usually encapsulated. Vast majority of lipomas are small, weighting only a few grams, and grow slowly. Lipoma occur rarely in breast causing diagnostic dilemma. Chondroid lipoma is a rare variant of lipoma which is benign in nature [10].

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Patient and Methods

Patient visiting breast clinic in Balad General Hospital, Private clinic and private hospital for period of ten months starting from October 2019 to July 2020 have been included in this prospective study for evaluation of 123 patients presented with breast lump. Data have been collected are the name, sex, Age, occupation, address, marital status, and family history. Specific investigation include ultrasound examination and mammography and fine needle aspirations cytology in some cases the breast lump were subjected to different surgical operation by different surgeon then histopathological report were collected and analyzed.

Result

Table No.1 show the total number of each benign breast disease from the total number of patients studied. The highest percent is fibroadenoma (34.2%) and then fibrocystic (28.5%) and then duct ectesia (12.2%) and breast abscess (12.2%). lactating adenitis (5.69%). granelomatous mastitis (3.25%). tubular adenoma (2.43%). fat necrosis and lipoma (1.6%) for each. Cavernouse heamangioma and Benign phyloid tumer and Seclerosingadenitis (0.8%) for each. **Table no (1)**

Cases	Number	percentage
Fibrocystic	35	28.5
Fibroadenoma	42	34.2
Duct ectesia	15	12.2
Seclerosingadenitis	1	0.8
Fat necrosis	2	1.6
Lipoma	2	1.6
Granelomatous mastitis	4	3.25
Breast abscess	10	8.13
Lactating adenitis	7	5.69
Cavernouseheamangioma	1	0.8
Benign phyloid tumer	1	0.8
Tubular adenoma	3	2.43
Total	123	100

Table no. 2 shows that benign breast diseases ocur at all age groups, most commonly at age group between 20 and 40 as follow: Fibroadenoma is more at age group 20-29 (24/123 patients), Fibrocystic disease is more at age group 40-49 (20/123 patients), Duct ectasia at age group 30-39(10/123 patients), Breast abscess at age group 30-39(5/123patients), Lactating adenitis at 20-29 years(3/123patients), Fat necrosis, granulomatous mastitis, Lipoma are at 40-49 years and tubular adenoma at 30-39 age group, (2/123 patients) for each, others show (1/123patient) between 20 and 49 years.

Table No.(2) Age Distribution of Benign Breast Diseases According the Age Groups

Age / disease	10-19 years	20-29 years	30-39 years	40-49 years	50-59 years	total
Fibrocystic	zero	zero	4	20	11	35
Fibroadenoma	11	24	7	Zero	zero	42
Duct ectesia	zero	4	10	1	Zero	15
Seclerosingadenitis	Zero	Zero	1	Zero	zero	1
Fat necrosis	Zero	zero	Zero	2	Zero	2
Lipoma	Zero	zero	Zero	2	Zero	2
Granulomatous mastitis	Zero	1	1	2	Zero	4
Breast abscess	1	4	5	Zero	Zero	10
Lactating adenitis	2	3	2	Zero	Zero	7
Cavernouseheamangioma	Zero	1	Zero	Zero	Zero	1
Benign phyloid tumer	Zero	Zero	Zero	1	Zero	1

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Tubular adenoma	**Zero**	**Zero**	**2**	**1**	**Zero**	**3**

From table No.3 we see the following: fibroadenoma high number in married women (30/42) patients (19/23) patients. Fibrocystic high number in unmarried (24/35) patients. Fat necrosis (2/2) patients in married women. Seclerosingadenitis (1/1) patients in married women. lipoma (2/2) patients in married women. Granulomatous mastitis high numbers (3/4) patients in married women. Breast abscess high numbers (10/10) patients in married women. Lactating adenitis(7/7) patients in married women. Cavernouse heamangioma (1/1) patient in unmarried women. Benign phyloid tumer (1/1) patients in married women. Tubular adenoma high numbers (3/3) patients in married women. Duct ectesia high number (14/15) patients in married women.

Table No.(3) Distribution of Diseases Between Married and Un married

diseases	married	unmarried	Total
Fibrocystic	11	24	35
Fibroadenoma	30	12	42
Duct ectesia	14	1	15
Seclerosingadenitis	2	Zero	2
Fat necrosis	2	Zero	2
Lipoma	2	Zero	2
Granelomatous mastitis	3	1	4
Breast abscess	10	Zero	10
Lactating adenitis	7	Zero	7
Cavernouseheamangioma	Zero	1	1
Benign phyloid tumer	1	Zero	1
Tubular adenoma	3	Zero	3

Discussion

The discovery of a breast mass either self-detected or identified by clinician, is a common, often distressing occurrence for many women. although most detected breast masses are benign, every woman presented with breast lump should be evaluated to exclude or establish a diagnosis. Despite of all the sophisticated diagnosis facilities available (80-88%) of all breast lump biopsies at present time are found to be benign (breast cancer fact file)[14].

From the table No.1 we see the high percent is fibro adenoma, 42/123 patients (34.2%). other study[6] show 23/100 patients. Fibrocystic (35/123) patients, (28.5%). other study show (38/100)[7]. Duct ectesia (15/123) patients (12.2%). other study[13] show (4/100) patient and breast abscess (10/123) patients (8.13%) others show[15] (10/100) patients. lactating adenitis(7/123) patients (5.69%) and (granelomatous mastitis (4/123) patients (3.25%).tubular adenoma (3/123) patients (2.43%).Other study show[10] (3,1,2/100) for adenitis, mastitis and tubular adenoma respectively. fat necrosis (2/123) patients (1.6%) and lipoma (2/123) patients (1.6%) others show[10] (2,8/100) respectively. Cavernouse heamangioma (1/123) and Benign phyloid tumor (1/123) and Seclerosingadenitis (1/123) (0.8%) for each. Others show[10] (zero,1,1)respectively.

From the table No.2 we see fibroadenoma high number (24/42) patients. in age group (20-29 years) Other study show[12] (20/23) patients. Fibrocystic high number (20/35) patients. in age group (40-49 years) other study show[7] (22/38) patients. duct ectesia high number (10/15) patients. in age group (30-39 years) other show[13] (3/4) patients. We see Breast abscess high numbers (4,5/10) patient in age group (20-29years). (30-39 years) Other show[15] (8/10) patients. We see lactating adenitis (3/7) patients in age group (20-29 years) other show[15]. (3/3) patients. And granelomatous mastitis high numbers (2/4) patients in age group (40-49 years) Other study show[8] (1/1) patient. And tubular adenoma high numbers (2/3) patients. Other study show[11] (1/2) patients. fat necrosis (2/2) patients in age group (40/49). others show[10] (2/2) patients. Lipoma (2/2) patients in age group (40-49) years others show[10], (8/14) patients. and Cavernouse

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heamangioma (1/1) patient others show[2] (zero) patient. Benign phyloid tumer (1/1) patients in age group (40-49)years patient. Others show[11] (1/1) patient. Seclerosingadenitis (1/1) patients in age group (30-39) years. others show[11] (1/1) patient.

From the table No.3 we see the following: fibroadenoma high number in married women (30/42) patients. others show[6] (19/23) patients. Fibrocystic high number in unmarried (24/35) patients, others show[7] (30/38) patients. Fat necrosis (2/2) patients in married women, others show[10]. Seclerosingadenitis (1/1) patients in married women, others show[11] (1/1). lipoma (2/2) patients in married women, others show[10] (10/14). Granelomatous mastitis high numbers (3/4) patients in married women, others show[8] (1/1) patients in married women. Breast abscess high numbers (10/10) patients in married women, others show[15] (9/10). Lactating adenitis(7/7) patients in married women, others show[6] (3/3). Cavernouse heamangioma (1/1) patient in unmarried women, others show[2] (zero) patient. Benign phyloid tumer (1/1) patients in married women, others show[11] (1/1) patients. Tubular adenoma high numbers (3/3) patients in married women, other study show[11] (2/2). Duct ectesia high number (14/15) patients in married women, other study show[13] (4/4) patients.

Conclusions

1. Increased surveillance following a benign breast biopsy is necessary because of the increased need for subsequent biopsy or risk of cancer development. This should include imaging (mammography or ultrasound) and a clinical breast examination 6 months, 1 year, and 2 years after a benign breast biopsy.
2. In most cases you won't need any follow up or treatment if you have a fibroadenoma. Usually you'll only be asked to go back to the breast clinic if it gets bigger or you notice a hanges.
3. We have to concentrate on the benefits of the presence and activation of breast clinic in our society for early detection and effective monitoring and follow up.

Recommendation

- For all women and physicians any breast disease should be evaluated for establishing the nature of disease and the way of follow up.
- In breast clinic enrage and teach the women about breast self-examination fore early detection of any abnormality in the breast.
- All women need to be alert to any changes in their breasts that are not normal for them. (If you have any change in your breast that is different to your normal hormonal changes, you should have it checked).
- Patients with benign lesions in which there is risk of malignancy needs specific investigations like mammography and biopsy to exclude or prove malignant changes like fibrocystic disease and papallomatosis.

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