

A Retrospective Observational Study to Assess the Clinical Spectrum of Benign Breast Diseases in BMC Sagar

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Abstract:

Introduction: Benign Breast Disease is a very prevalent condition. It comprises of infectious and inflammatory diseases of the breast, Mondor's Disease, Fibroadenomas, Fibrocystic Disease, Intraductal Papillomas, Nipple Inversion, Cyclical Mastalgia, Involution, Sclerosing Adenosis, Duct Ectasia and Atypical Ductal or Lobular Hyperplasia. The magnitude is rising day by day.

Objective: To study the clinical spectrum of Benign Breast Diseases in patients presenting to Surgery OPD in BMC Sagar

Methods: A total of 90 females more than 15 years of age with Benign Breast Diseases and undergoing USG and FNAC for the same, presenting to Surgery OPD were recruited for study from January to June 2023. OPD records were segregated and compiled. The prevalence and the clinical spectrum of various benign breast diseases were determined at our institute.

Results: In 90 subjects enrolled, the most common benign breast disease identified was Fibroadenoma (56.7%) followed by Fibrocystic Disease (10%) and Breast Abscess (7.7%). The least common presentation was that of mycotic infections, involution, macrocysts and radial scars (each 0%).

Conclusion: Epidemiology of Benign Breast Diseases show large interregional variability. Knowledge of spectrum of Benign Breast Diseases and their prevalence is indispensable for the preventive strategies to be structured and encouragement of Breast self-examination to be started early in the concerned population.

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Introduction

Benign Breast Disease is a prevalent condition that affects approximately 40% of the adult female population. There are a number of conditions labeled under Benign Breast Disorders. Infectious and inflammatory disorders of the breast postpartum period are the most common time for breast infections to occur. Infections of the breast unrelated to lactation are classified as:

- intrinsic (secondary to abnormalities in the breast), most commonly, periductal mastitis or
- Extrinsic (secondary to an infection in an adjacent structure, e.g., skin, thoracic cavity); the most common being infected sebaceous cyst.

- Bacterial Infections – caused by Staphylococcus and Streptococcus species
- Mycotic Infections – rare, and usually involve blastomycosis and sporotrichosis.
- Hidradenitis Suppurativa - chronic inflammatory condition of the nipple-areola complex or axilla that originates within the accessory areolar glands of Montgomery or within the axillary sebaceous glands.
- Mondor's disease - Variant of thrombophlebitis that involves the superficial veins of the anterior chest wall and breast.

ANDI Classification of Benign Breast Disorders

	Normal	Disorder	Disease
Early reproductive year (age 15-25 y)	Lobular development	Fibroadenoma	Giant fibroadenoma
	Stromal development	Adolescent hypertrophy	Gigantomastia
	Nipple eversion	Nipple inversion	Subareolar abscess
			Mammary duct fistula

- Fibroadenomas - benign tumours comprised of both stromal and glandular elements; typically well circumscribed
- limited to massive stromal hyperplasia (gigantomastia)
- Nipple inversion - disorder of development of the major ducts, which prevents normal protrusion of the nipple.

Later reproductive years (age 25-40 y)	Cyclical changes of menstruation	Cyclical mastalgia Nodularity	Incapacitating mastalgia
	Epithelial hyperplasia of pregnancy	Bloody nipple discharge	

- Cyclical pronounced mastalgia and severe painful nodularity
- Epithelial hyperplasia of pregnancy - papillary projections sometimes give rise to bilateral bloody nipple discharge.

Involution (age 35-55y)	Lobular involution	Macrocyts	-
		Sclerosing lesions	
	Duct involution		
	Dilatation	Duct ectasia	Periductal mastitis
	Sclerosis	Nipple retraction	-
Epithelial turnover	Epithelial hyperplasia	Epithelial hyperplasia with atypia	

- Involution of lobular epithelium
- Macrocyts - When the stroma involutes too quickly, alveoli remain and form microcysts, which are precursors of macrocysts
- Sclerosing adenosis- disorder of both the proliferative and the involutional phases of the breast cycle, characterized by distorted breast lobules and usually occurs in the context of multiple microcysts, but occasionally presents as a palpable mass.
- Radial scars - originate at sites of terminal duct branching where the characteristic histologic changes radiate from a central area of fibrosis
- Intraductal papilloma - arise in the major ducts, usually in premenopausal women; generally are <0.5 cm in diameter but may be as large as 5 cm; Common presenting symptom - nipple discharge, which may be serous or bloody
- Duct ectasia - clinical syndrome characterized by dilated subareolar ducts that are palpable and often associated with thick nipple discharge.
- Zuska's Disease or Recurrent Periductal mastitis
- Atypical proliferative diseases - include ductal and lobular hyperplasia, both of which display some features of carcinoma in situ. Women with atypical ductal or lobular hyperplasia have a fourfold increase in breast cancer risk.
- Fibrocystic disease - used as a diagnostic term to describe pain symptoms, to rationalize the

need for breast biopsy, and to explain biopsy results.

The first investigation of palpable breast masses is needle biopsy, which allows for the early diagnosis. The diagnosis is clinched further by USG breast.

This study was undertaken to study the clinical spectrum of Benign Breast Diseases in patients from Bundelkhand region presenting to Surgery OPD in BMC Sagar.

Materials and Methods

In this retrospective, observational study, a total of 90 females more than 15 years of age with Benign Breast Diseases and undergoing USG and FNAC for the same, presenting to OPD of General Surgery Department of Bundelkhand Medical College, Sagar were included. This study was performed in Bundelkhand Medical College, Sagar, from January 2023 to June 2023. Ethical approval was obtained from the hospital review committee before conducting the study. Informed written consent was taken from each patient before Enrollment in the study. Inclusion criteria consisted of female patients presenting with breast lump, nipple discharge, sinus, associated fever and mastalgia.

Exclusion criteria consisted of patients with malignant breast lump, male gynecomastia cases, any patient incapable of providing informed consent, and those unable to commit to the medical

follow-up of the study for geographical, social, or psychological reasons.

OPD records were segregated and compiled regarding the prevalence, USG breast report and corresponding FNAC report. The data was presented as percentage of prevalence of various conditions included in Benign Breast Diseases. Data was entered in Microsoft Excel software. The prevalence and clinical spectrum of various benign breast diseases were determined at our institute.

Results and Discussion

Study to assess the prevalence of various Benign Breast Disorders was carried out for 90 subjects.

The most common entity identified was Fibroadenoma (56.7%) followed by Fibrocystic Disease (10%) and Breast Abscess (7.7%).

The least common presentation was that of mycotic infections, involution, macrocysts and radial scars (each 0%). Also, data pertaining to the size of lump was extracted and the prevalence noted.

Majority of females presented with lump of size 2 cm to 5 cm (55.5%), followed by size > 5 cm, which was seen in 32 females (35.5%). Only 9% females presented in OPD with breast lump of size < 2 cm.

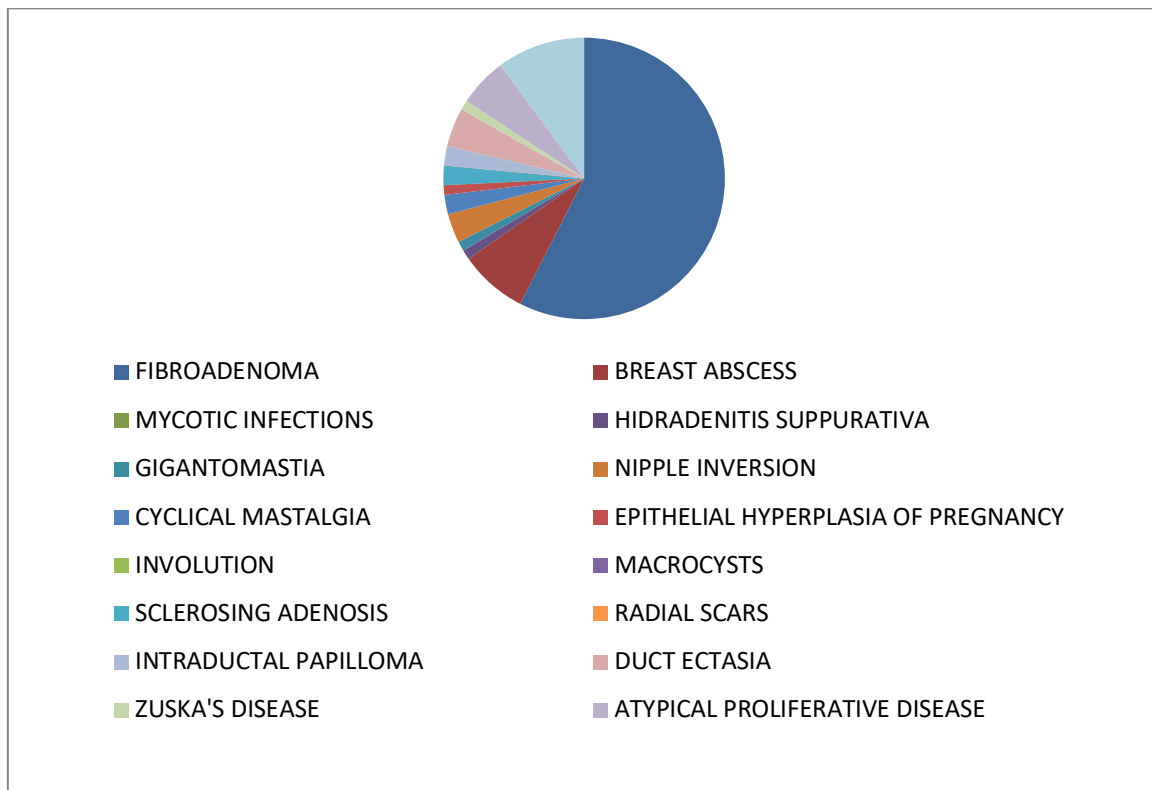


Figure 1:

Table 1: Frequency of various Benign Breast Disorders in patients presenting to Surgery OPD of BMC, Sagar

Benign Breast Disorders	No of Cases out of 90 subjects	Percentage
Fibroadenoma	51	56.7%
Breast Abscess (Bacterial)	7	7.7%
Mycotic Infections	0	0%
Hidradenitis Suppurativa	1	1.1%
Mondor's Disease	1	1.1%
Gigantomastia	1	1.1%
Nipple Inversion	3	3.3%
Cyclical Mastalgia	2	2.2%
Epithelial hyperplasia of Pregnancy	1	1.1%
Involution	0	0%
Macrocysts	0	0%
Sclerosing Adenosis	2	2.2%
Radial Scars	0	0%
Intraductal Papilloma	2	2.2%

Duct Ectasia	4	4.4%
Zuska's Disease	1	1.1%
Atypical Proliferative Disease	5	5.5%
Fibrocystic Disease	9	10%
	90	100%

For correct diagnosis of breast disease background knowledge of general features of individual breast lesions like incidence, age distribution, symptoms and palpatory findings are very important. Benign conditions of breast are significantly more common than the malignant condition in developing countries.

There is limited literature available on this and it suggests that benign breast disease is a common problem in the developing countries as well. The incidence of these presentations varies in different geographical areas according to the spectrum of the benign breast diseases encountered.

Conclusion

The term "benign breast diseases" encompasses a heterogeneous group of lesions that may present with a wide range of symptoms or may be detected as incidental microscopic findings, and these are more frequent lesions of breast than malignant one. FNAC plays an important role to fetch the correct diagnosis in certain benign breast diseases which mimic cancers clinically. Present study is in concordance with other studies showing fibroadenoma as commonest benign breast lesion.

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